

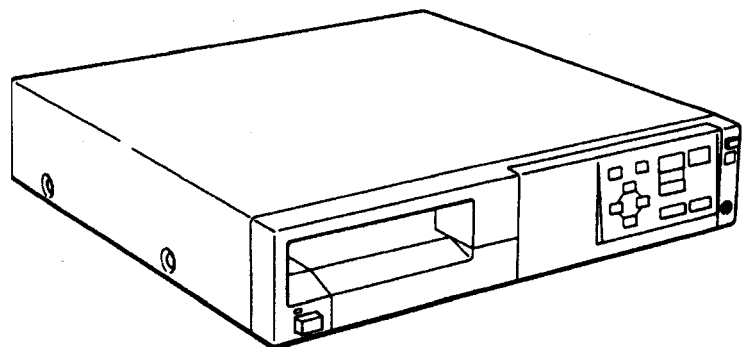
SONY®

COLOR VIDEO PRINTER


UP-1200A

UP-1200AEPM

SERVICE MANUAL



SAFETY RELATED COMPONENT WARNING

Components identified by shading and  marked on the schematic diagrams and parts list are critical to safe operation. Replace these components with SONY parts whose part numbers appear as shown in this manual or in supplements published by SONY.

Note:

This service manual is jointly used for the UP-1200A (UC) and UP-1200AEPM (EK) destinations.

If a difference exists between each destination, the model name is described on the corresponding page.

The common description is not contained in this manual.

CONTENTS

<u>Section</u>	<u>Page</u>	<u>Section</u>	<u>Page</u>
1. GENERAL		4. PRINTED WIRING BOARDS AND SCHEMATIC DIAGRAMS	
1-1. Specifications.....	5	4-1. Frame Schematic Diagram.....	75
1-2. Location and Function of Parts and Controls	7	4-2. Printed Wiring Boards and Schematic Diagrams	79
1-3. System Overview.....	11	4-3. Semiconductors	144
1-4. Before Printing.....	12	5. EXPLODED VIEWS	
1-5. Making Full-Size Printouts	15	5-1. Cabinet Assembly.....	164
1-6. Making Variations of Printouts.....	19	5-2. Chassis Assembly (1)	165
1-7. Making Printouts with a Caption.....	25	5-3. Chassis Assembly (2)	166
1-8. Supplied Accessories.....	27	5-4. Mechanism Deck Assembly (1)	167
1-9. Connections	28	5-5. Mechanism Deck Assembly (2)	168
1-10. Preparing the Remote Control Units.....	31	5-6. Mechanism Deck Assembly (3)	169
1-11. Adjusting the Printout Quality	33	5-7. Mechanism Deck Assembly (4)	170
1-12. Printer Initial Setup	36	5-8. Mechanism Deck Assembly (5)	171
1-13. Error Messages	42	5-9. Remote Control Unit	172
1-11. Troubleshooting	43	6. ELECTRICAL PARTS LIST	173
2. DISASSEMBLY		7. ELECTRICAL ADJUSTMENT	
2-1. Removal of Cabinet Assembly.....	44	7-1. Preparation before Adjustment.....	201
2-2. Removal of Door Panel Sub Assembly.....	44	7-1-1. Equipment Required.....	201
2-3. Removal of IF-27 Board	45	7-1-2. Connection of the Equipment.....	201
2-4. Removal of Mechanism Deck Assembly	45	7-1-3. Confirmation of the Input Signal.....	202
2-5. Removal of MD (P201) Assembly (UP-1200A)	46	7-1-4. How to Operate Adjustment Remote Controller RM-95 (J-6082-053-A)	203
Removal of MD (P231) Assembly (UP-1200AEPM)	46	7-1-5. Service Mode	203
2-6. Removal of Main Board (FMY-13 Board, VA-76 Board) Assembly	46	UP-1200A	
2-7. Removal of Switching Regulator	47	7-2. Video Circuit Adjustment (VA-76 Board)	211
2-8. Removal of Cassette Entrance Guide Assembly	47	7-2-1. INT/EXT Detection Level Adjustment.....	211
2-9. Removal of HM-22 (L) Board	48	7-2-2. BGP Phase Adjustment	211
2-10. Removal of Stepping Motor Assembly.....	48	7-2-3. APC Free-Running Frequency Adjustment.....	212
2-11. Removal of Motor Bracket Block Assembly	49	7-2-4. INT Sync Generator Frequency Adjustment.....	212
2-12. Removal of Ribbon Motor Assembly.....	50	7-2-5. AFC Error Voltage Adjustment.....	212
2-13. Removal of Head Driving Block Assembly	50	7-2-6. Y/C Separation Y-Level Adjustment.....	212
2-14. Removal of Head Drive Motor Assembly ...	51	7-2-7. Y/C Separation Chroma-Level Adjustment.....	213
2-15. Removal of Upper Guide Assembly and Top Plate Block Assembly.....	51	7-2-8. Decoder Hue Adjustment.....	213
2-16. Removal of Cassette Guide 1 and Paper Feed Assembly.....	52	7-2-9. Decoder Color (1) Adjustment	214
2-17. Removal of Head Assembly and Head Power CAM Block Assembly	53	7-2-10. ABL Adjustment (1)	214
2-18. Removal of Thermal Head	54	7-2-11. ABL Adjustment (2)	214
3. DIAGRAMS		7-2-12. White REF Level Adjustment	215
3-1. Circuit Boards Location	55	7-2-13. AGC Level Adjustment.....	215
3-2. Overall Block Diagram	56	7-2-14. Decoder Color (2) Adjustment	215
3-3. Analog Block Diagram	59	7-2-15. Decoder Sharpness Adjustment	216
3-4. Digital Block Diagram	63	7-2-16. Encoder White Balance Adjustment	216
3-5. System Control Block Diagram	67	7-2-17. D/A REF Adjustment	217
3-6. Power Supply Block Diagram	71	7-2-18. Encoder Chroma Level Adjustment.....	217
		7-2-19. Encoder Color Burst Level Adjustment.....	218
		7-2-20. S Video Output Y Level Adjustment ...	218
		7-2-21. S Video Output Chroma Level Adjustment.....	218
		7-2-22. OSD Level Adjustment.....	219

CONTENTS

<u>Section</u>	<u>Page</u>	<u>Section</u>	<u>Page</u>
UP-1200AEPM			
7-1. Preparation before Adjustment.....	220		
7-1-1. Equipment Required.....	220		
7-1-2. Connection of the Equipment.....	220		
7-1-3. Confirmation of the Input Signal.....	221		
7-2. Video Circuit Adjustment			
(VA-76 (B) Board).....	222		
7-2-1. INT/EXT Detection Level Adjustment....	222		
7-2-2. BGP Phase Adjustment	222		
7-2-3. APC Free-Running Frequency			
Adjustment.....	223		
7-2-4. INT Sync Generator Frequency			
Adjustment.....	223		
7-2-5. AFC Error Voltage Adjustment.....	223		
7-2-6. Y/C Separation Y-Level Adjustment.....	223		
7-2-7. Y/C Separation Chroma-Level			
Adjustment.....	224		
7-2-8. SYNC SEPA Phase Check	224		
7-2-9. ABL Adjustment (1)	225		
7-2-10. ABL Adjustment (2)	225		
7-2-11. White REF Level Adjustment	225		
7-2-12. Decoder DL AMP DAT Adjustment.....	226		
7-2-13. Decoder Color (1) Adjustment	226		
7-2-14. Decoder Color (2) Adjustment	226		
7-2-15. AGC Level Adjustment.....	227		
7-2-16. Decoder Sharpness Adjustment	227		
7-2-17. VRB CLP Reference Check.....	227		
7-2-18. OSD Level Adjustment	228		
7-2-19. Encoder White Balance Adjustment.....	228		
7-2-20. D/A REF Adjustment	229		
7-2-21. Encoder Chroma Level Adjustment.....	229		
7-2-22. Encoder Color Burst Level			
Adjustment.....	230		
7-2-23. S Video Output Y Level Adjustment	230		
7-2-24. S Video Output Chroma Level			
Adjustment.....	231		
7-2-25. Decoder Hue Adjustment.....	231		
7-2-26. Decoder DL AMP DAT Adjustment.....	231		
7-3. Service Mode	232		
7-3-1. Entering the Service Mode	232		
7-3-2. Entering the Print Operation of			
Pattern Signal.....	232		
7-3-3. Entering the Print Number Counter	233		
233			
7-3-4. Replacing the Head	233		
233			
7-4. Head Replacement	236		
7-4-1. Adjustment.....	236		

SECTION 1 GENERAL

This section is extracted
from instruction manual.

1-1. SPECIFICATIONS **UP-1200A**

- Power requirements
120 V AC, 50/60 Hz
- Power consumption
About 1.8 A max. at 25°C, 120 V AC
- Operating temperature
5°C to 35°C (41°F to 95°F)
- Dimensions
About 424 × 91 × 397 mm (w/h/d)
(16³/₄ × 3⁵/₈ × 15³/₄ inches)
- Mass
About 8.5 kg (18 lb 12 oz)
- Printing system
Sublimation heat transfer printing
- Thermal head
5.6 dot/mm (512 dots)
- Total gradation
256 levels each for yellow, magenta, and cyan
- Printing time
Approximately 60 seconds (normal size color printing)
Approximately 30 seconds (monochrome printing)
- TV system
NTSC/EIA standards
- Input connectors
S-VIDEO (Separate luminance (Y) and chrominance (C) signals): DIN 4-pin
Y: 1 Vp-p
C: 0.29 Vp-p color burst
75 ohms (75 ohm termination switch set to ON)
VIDEO (NTSC composite video signal): BNC connector
1 Vp-p, 75 ohms (75 ohm termination switch set to ON), sync negative
AC IN (for power input)
- Output connectors
S-VIDEO (Separate luminance (Y) and chrominance (C) signals): DIN 4-pin
Y: 1 Vp-p, 75 ohms
C: 0.29 Vp-p color burst, 75 ohms
(75 ohm termination switch set to ON)
VIDEO (NTSC composite video signal): BNC connector,
1 Vp-p, 75 ohms (75 ohm termination switch set to ON), sync negative
- Controls connectors
REMOTE 1 (front panel, for the supplied remote control unit only): Special mini jack
REMOTE 2 (automatic printing connector): Stereo mini jack
For details of the timing pulse to REMOTE 2, see "Using the automatic printing capabilities" on this page.

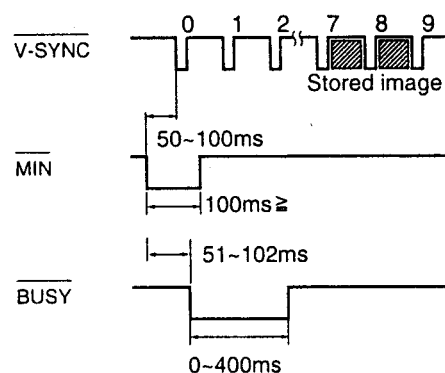
- Ink ribbon cassette and printing sheet sets
Color printing pack: UPC-1010 (100 sheets)
B & W printing pack: UPC-1020 (100 sheets)
Self laminating color printing pack: UPC-1040 (75 sheets)
- Supplied accessories
Color printing pack (1)
Paper tray (1)
Paper cover (1)
Remote control unit (1)
Connecting cable for the remote control unit (1)
Dry battery SUM-3 (NU) (2)
AC power cord (1)
Warranty card (1)
Operating instructions (1)

Using the automatic printing capabilities (REMOTE 2)

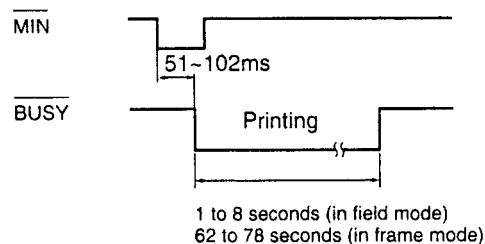
If you send the remote control pulse signals illustrated below through the REMOTE 2 connector, the printer is remotely controlled according to the settings of REMOTE 2 from the SET UP menu. (see "Selecting the Operation Mode for Automatic Printing Capabilities" page 52)

To begin, turn on the power and select the input signal. Display the image from the video source, then send a remote control signal shown below.

MEMORY IN timing



Printing timing



Design and specifications are subject to change without notice.

UP-1200AEPM

Power requirements

220 to 240 V AC (~), 50/60 Hz

Power consumption

About 1.0 A max. at 25°C, 240 V AC (~)

Operating temperature

5°C to 40°C (41°F to 104°F)

Operating humidity

20 % to 80 % (no condensation allowed)

Storage and transport temperature

-20°C to 60°C (-4°F to 140°F)

Storage and transport humidity

20 % to 90 % (no condensation allowed)

Dimensions

About 424 × 91 × 397 mm (w/h/d)

(16³/₄ × 3⁵/₈ × 15³/₄ inches)

Mass

About 8.5 kg (18 lb 12 oz)

Printing system

Sublimation heat transfer printing

Thermal head

6.72 dot/mm (608 dots)

Total gradation

256 levels each for yellow, magenta, and cyan

Frame memory

One frame memory

Printing time

Approximately 60 seconds (normal size color printing)

Approximately 30 seconds (monochrome printing)

TV system

PAL B.G.I. standards

Input connectors

S-VIDEO (Separate luminance (Y) and chrominance (C) signals): DIN 4-pin

Y: 1 Vp-p

C: 0.3 Vp-p color burst

75 ohms (75 ohm termination switch set to ON)

VIDEO (PAL composite video signal): BNC connector

1 Vp-p, 75 ohms (75 ohm termination switch set to ON), sync negative

AC IN (for power input)

Output connectors

S-VIDEO (Separate luminance (Y) and chrominance (C) signals): DIN 4-pin

Y: 1 Vp-p, 75 ohms

C: 0.3 Vp-p color burst, 75 ohms

(75 ohm termination switch set to ON)

VIDEO (PAL composite video signal): BNC connector

1 Vp-p, 75 ohms (75 ohm termination switch set to ON), sync negative

Controls connectors

REMOTE 1 (front panel, for the supplied remote control unit only): Special mini jack

REMOTE 2 (automatic printing

connector): Stereo mini jack

For details of the timing pulse to REMOTE 2, see "Using the automatic printing capabilities" on this page.

Ink ribbon cassette and printing sheet sets

Color printing pack: UPC-1010 (100 sheets)

B & W printing pack: UPC-1020 (100 sheets)

Self laminating color printing pack: UPC-1040 (75 sheets)

Supplied accessories

Color printing pack UPC-1010 (1)

Paper tray (1)

Paper cover (1)

Remote commander RM-5100 (1)

Connecting cable for the remote commander (1)

Dry battery (R6) (2)

AC power cord (1)

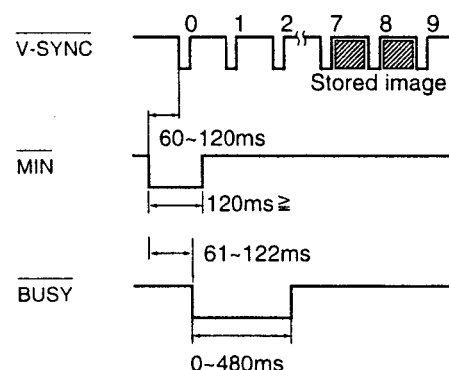
Instructions For Use (1)

Using the automatic printing capabilities (REMOTE 2)

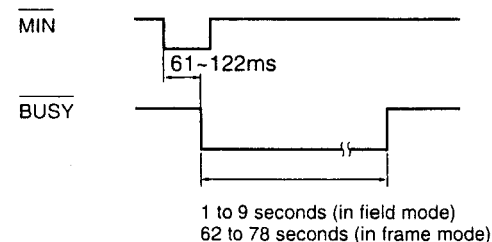
If you send the remote control pulse signals illustrated below through the REMOTE 2 connector, the printer is remotely controlled according to the settings of REMOTE 2 from the SET UP menu. (see "Selecting the Operation Mode for Automatic Printing Capabilities" page 54)

To begin, turn on the power and select the input signal. Display the image from the video source, then send a remote control signal shown below.

MEMORY IN timing



Printing timing



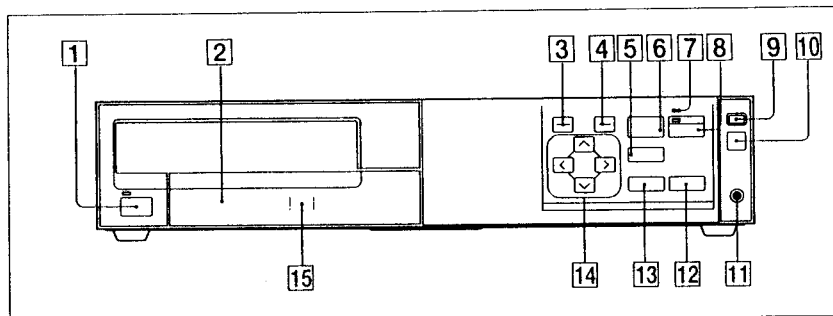
Design and specifications are subject to change without notice.

1-2. LOCATION AND FUNCTION OF PARTS AND CONTROLS

UP-1200A

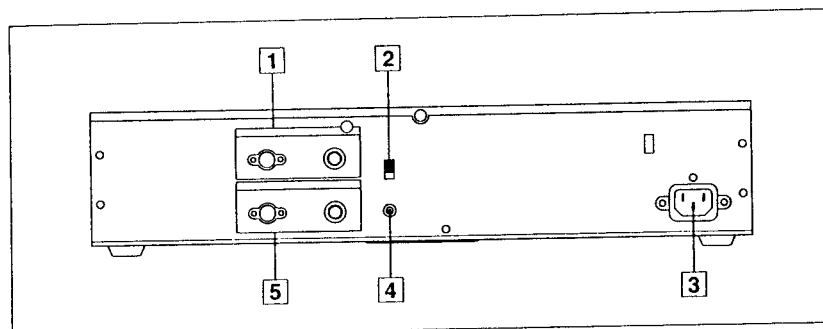
For details, see the pages indicated in ().

Front



- 1 POWER switch**
Press to turn the printer on or off.
- 2 Paper tray/paper cover (10, 41)**
Paper tray: Load paper into this tray.
Paper cover: The printout is ejected to this tray.
- 3 MENU button**
This button is used to display menus or to return to the regular screen from the main menu or sub menus.
- 4 EXEC button (29, 35, 36, 37, 49)**
Press this button to return to the previous menu. Also, this button is used to enter characters for a caption.
- 5 SOURCE/MEMORY button (15, 31, 32, 52)**
Press to select which signal is to be output to the monitor.
The memory image and source image are changed whenever you press this button.
- 6 MEMORY IN button (15, 31, 32)**
Press to store an image into memory.
- 7 ALARM lamp (66)**
This lamp lights, in orange, when the paper has jammed or another error occurs.
- 8 PRINT button (16, 31, 32)**
Press to make printouts.
- 9 PUSH OPEN button (8)**
Press to open the right front panel door when loading an ink ribbon cassette.
- 10 Remote sensor (43)**
Aim the head of the remote control unit toward this sensor.
- 11 REMOTE 1 connector (41)**
Used to Connect the remote control unit (supplied) when being used as a wired type.
- 12 STOP button (16, 20, 31, 56)**
Press to stop printing midway.
- 13 MEMORY PAGE button (25)**
Press to select the memory page.
- 14 Cursor keys**
Press to position the cursor. Select a desired item from the menu by pressing the \wedge or \vee button and set the value by pressing the $<$ or $>$ button.
Also, these keys are used to enter characters for a caption.
- 15 PUSH indication (10, 68)**
Press to remove the paper tray.

Rear



- 1 INPUT connectors (39)**
Used to connect to the video equipment for source image.
- 2 75-ohm termination switch (for RGB input signal and composite video signal) (39)**
Normally, set this switch to ON. Set it to OFF if the input signal should drop when you connect additional equipment to the video equipment.
- 3 AC IN connectorx (39, 40, 41)**
Used to connect to a wall outlet with the supplied power cord.
- 4 REMOTE 2 connector (41)**
Used to connect the FS-20 foot switch (not supplied) or input remote control pulse signals for automatic printing.
- 5 OUTPUT connectors (40)**
Used to connect to the video monitor.

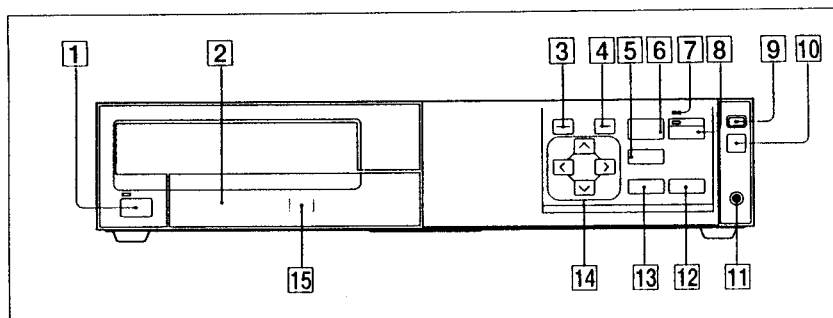
Connector	Connectable equipment
S-VIDEO	Video equipment with a Y/C separated output
VIDEO	Video equipment with a composite video signal output


Connector	Connectable video monitor
S-VIDEO	Video monitor with a Y/C separated input
VIDEO	Video monitor with a composite video signal input

UP-1200AEPM

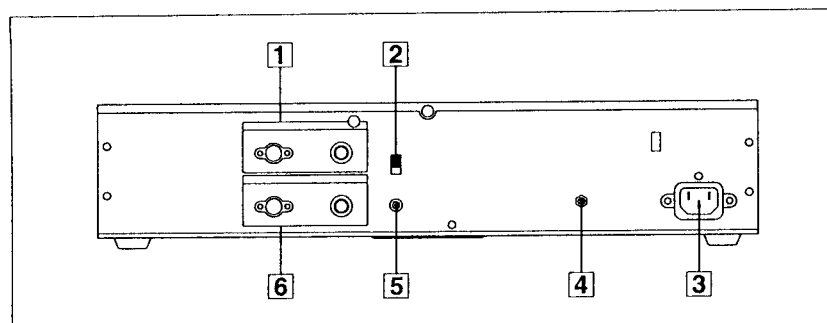
For details, see the pages indicated in ().

Front



- 1 POWER ① switch**
Press to turn the printer on or off.
- 2 Paper tray/paper cover (10, 41)**
Paper tray: Load paper into this tray.
Paper cover: The printout is ejected to this tray.
- 3 MENU button**
This button is used to display menus or to return to the regular screen from the main menu or sub menus.
- 4 EXEC button (29, 35, 36, 37, 49)**
Press this button to return to the previous menu. Also, this button is used to enter characters for a caption.
- 5 SOURCE/MEMORY button (15, 31, 32, 52)**
Press to select which signal is to be output to the monitor.
The memory image and source image are changed whenever you press this button.
- 6 MEMORY IN ⇄ button (15, 31, 32)**
Press to store an image into memory.
- 7 ALARM lamp (66)**
This lamp lights, in orange, when the paper has jammed or any problem occurs.
- 8 PRINT  button (16, 31, 32)**
Press to make printouts.
- 9 PUSH OPEN button (8)**
Press to open the right front panel door when loading an ink ribbon cassette.
- 10 Remote sensor (43)**
Aim the head of the remote control unit toward this sensor.
- 11 REMOTE 1 connector (41)**
Used to Connect the remote control unit (supplied) when being used as a wired type.
- 12 STOP button (16, 20, 31, 56)**
Press to stop printing midway.
Press this button when the message "STOP STOP STOP" appears.
- 13 MEMORY PAGE button (25)**
Press to select the memory page.
- 14 Cursor keys**
Press to position the cursor. Select a desired item from the menu by pressing the \wedge or \vee button and set the value by pressing the $<$ or $>$ button.
Also, these keys are used to enter characters for a caption.
- 15 PUSH indication (10, 68)**
Press to remove the paper tray.

Rear



- 1 INPUT connectors (39)**
Used to connect to the video equipment for source image.

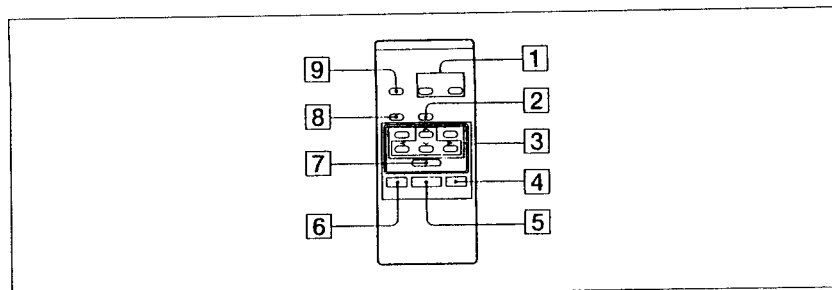
Connector	Connectable equipment
S-VIDEO	Video equipment with a Y/C separated output
VIDEO	Video equipment with a composite video signal output

Refer to "Important safeguards/notices for use in the medical environments on page 2.
- 2 75-ohm termination switch (for PAL composite video signal) (39)**
Normally, set this switch to ON. Set it to OFF if the input signal should drop when you connect additional equipment to the video equipment.
- 3 ~ AC IN connector (39, 40, 41)**
Used to connect to a wall outlet with the supplied power cord.
- 4 Equipotential ground terminal ∇**
Used to connect to the equipotential plug to bring the various parts of a system to the same potential.
Refer to "Important safeguards/notices for use in the medical environments on page 2.
- 5 REMOTE 2 connector (41)**
Used to connect the RM-91 remote commander (not supplied) or input remote control pulse signals for automatic printing.
- 6 OUTPUT connectors (40)**
Used to connect to the video monitor.

Connector	Connectable video monitor
S-VIDEO	Video monitor with a Y/C separated input
VIDEO	Video monitor with a composite video signal input

Refer to "Important safeguards/notices for use in the medical environments on page 2.

Remote Control Unit

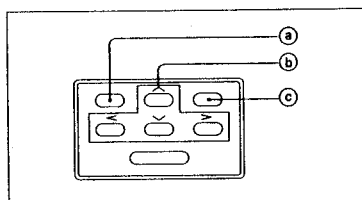


- 1 PRINT QTY + and - buttons (18)**
Used to set the number of copies of one printout (on the regular screen).

Button	Operation
+	Increases the number of copies.
-	Reduces the number of copies.

- 2 MULTI PICTURE button (28)**
Press to access the MULTI PICTURE sub menu directly from the any other screen.

- 3 Menu control keys**



- a MENU button**
This button is used to display menus or to return to the regular screen from the main menu or sub menu.
- b Cursor keys**
Press to position the cursor. Select a desired item from the menu by pressing the ^ or v button and set the value by pressing the < or > button.
Also, these keys are used to enter characters for a caption.

- c EXEC button (29, 35, 36, 37, 49)**
Press this button to return to the previous menu. Also, this button is used to enter characters for a caption.

- 4 PRINT button (16, 31, 32)**

Press to make printouts.

- 5 MEMORY IN button (15, 31, 32)**

Press to store an image into memory.

- 6 SOURCE/MEMORY button (15, 31, 32, 52)**

Press to select which signal is to be output to the monitor.
The memory image and source image are changed whenever you press this button.

- 7 STOP button (16, 31, 56)**

Press to stop printing midway.
Press when "STOP STOP STOP" appears.
Press this button when the message "STOP STOP STOP" appears.

- 8 COLOR ADJUST button (45)**

Press to access the COLOR ADJUST sub menu directly from any other screen.

- 9 MEMORY PAGE button (25)**

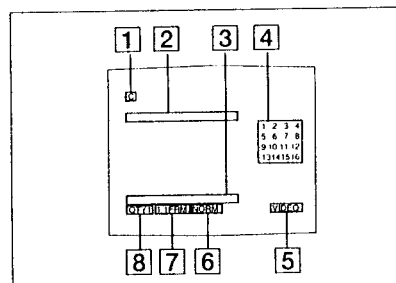
Press to select the memory page.

Monitor Display

There are two types of screen display; the regular screen display and the menu screen.

Regular screen message

When you first turn on the printer, the regular screen message appears.



- 1 C (Caption)**

C is displayed in white when the printer is set to print a caption.
C is displayed in dark blue when the printer is not set to print a caption.
M is displayed in white when the printer is set to print a mirror caption.

- 2 Error message display area**

Error messages are displayed.

- 3 Warning message display area**

Warning messages are displayed.

- 4 Number of four or 16 reduced image area**

When the printer is set to store multiple reduced images into memory, corresponding numbers appear to indicate the memory status.

- 5 Image type display**

This indicates the type of image shown on the monitor screen.

When the image being played back from print source equipment is displayed on the screen, the corresponding print source (the input signal connector name, for example VIDEO) appears.
When an image stored in memory is displayed on the screen, MEMORY appears.

- 6 Print mode display**

This indicates the selected print mode.

Several examples are shown below:

Display	Print mode
NORM	Makes a printout of one normal image
N2	Makes a printout of two identical normal images
MIR	Makes a printout of one mirror image
M16	Makes a printout of 16 reduced mirror images

- 7 Memory page display**

The memory page you select appears.

The memory page whose image is being printed blinks in green.

The following shows several examples.

Display	Meaning
1/1FRM	The frame mode is selected.
1/2FLD	The second page is selected in field mode.

- 8 Number of copies to be printed**

Indicates the number of copies to be printed.

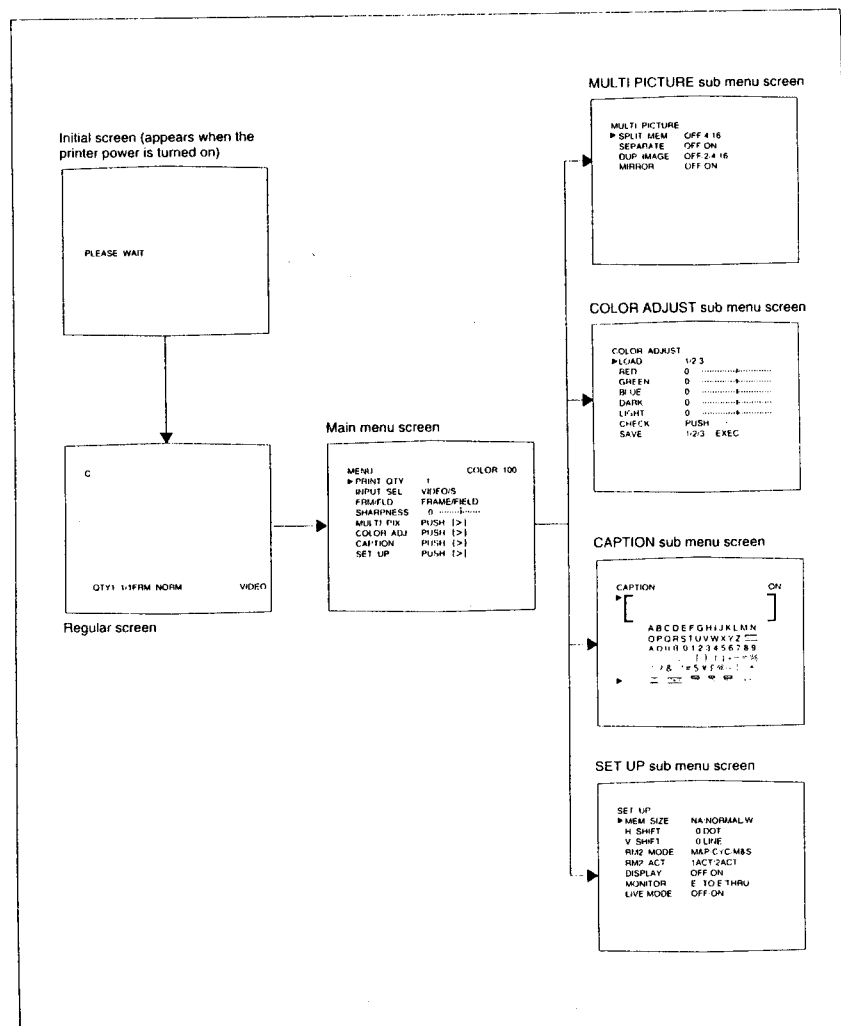
This item blinks while the printer is busy. Also, the color changes to indicate the progress while making a color printout, as follows:

Printing start - yellow - magenta - cyan - printing end. When making black and white printouts, this blinks in white.

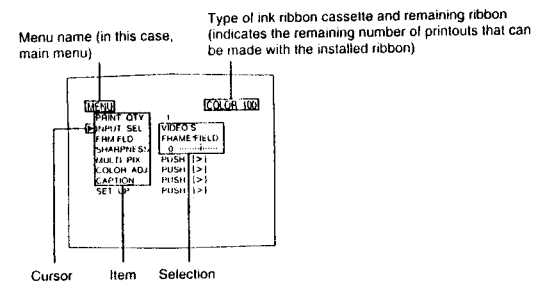
Menu screen

Menu screen tree-chart

The menu screen configuration is shown using the tree-chart.



Menu screen display



About remaining ribbon

Use the remaining ribbon display as a guide only. Depending on the type of ribbon being used, the printer may not be able to correctly display the actual amount of ribbon remaining.

Display color

The color indicates the printer status.

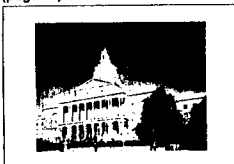
Display color	Meaning
Light blue	Indicates the menu name.
Green	In the item column, indicates the selected item. In the selection column, indicates an item that has already been set or one that must be set.
White	In both the item and selection column, indicates that the item has not been selected or has not yet been set
Dark blue	Indicates that this item or selection cannot be selected. They are functions which become effective depending on another item or selection settings.

1-3. SYSTEM OVERVIEW

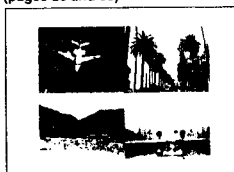
The Sony UP-1200/1200A color video printer is designed for capturing images from video equipment and making printouts of those images. By changing the printout mode, different types of printouts can be made. Also, you can add a caption to a printout. Printer setup is done interactively by picking from displayed menus. The printer can make the following types of printouts.

Printouts that can be made with the printer

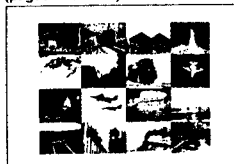
Printout of a full-size image
(page 14)



Printout of four reduced images
(pages 26 and 30)



Printout of 16 reduced images
(pages 26 and 30)

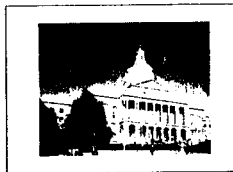


In addition to the above printouts of multiple reduced images, printouts of multiple reduced images with white borders can be made.

Printouts of identical images
(page 28)

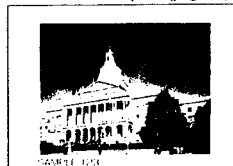


Printout of a mirror image (page 28)



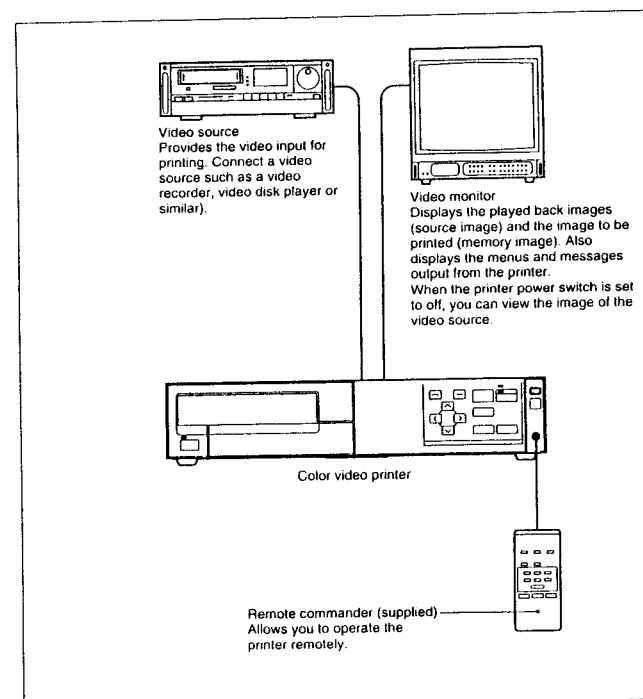
Printouts of mirror images where the image is rotated about its vertical axis

Printouts with a caption (page 36)



System Configuration

The following shows an example printer system configuration.



1-4. BEFORE PRINTING

This section describes the following operations that must be made prior to start printing after installing the printer and making connections.

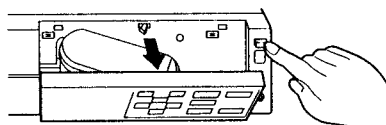
- Loading an ink ribbon cassette (see page 8)
- Loading paper (see page 10)
- Selecting the input signal (see page 12)

Once the above operations are done, there should be no need to subsequently perform in routine printing operations. Perform the above operations, if necessary.

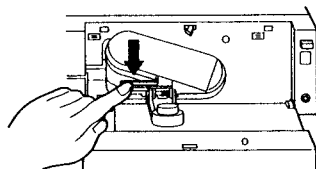
Loading an Ink Ribbon Cassette

To make printouts, an ink ribbon cassette and paper should be loaded. Both of those should be used in correct pairs. (see "Ink Ribbon Cassette and Paper" page 64)

- 1 Push the PUSH OPEN button.
The front panel opens.

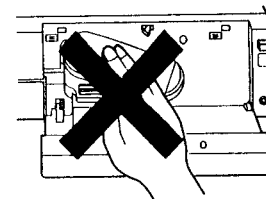


- 2 Remove the ink ribbon cassette by pulling down the EJECT lever.

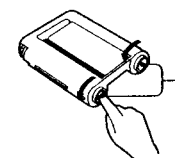


Note

Never put your hand into the ink ribbon cassette dock. The thermal head becomes very hot. You may burn yourself if you touch it.

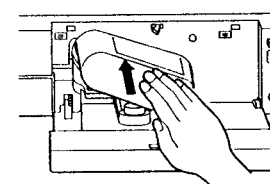


- 3 Take up any slack in the ink ribbon.
If the ribbon is left slack, it may be crumpled and damaged when inserted.

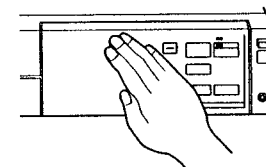


Wind the spools of the ink ribbon cassette as illustrated until a black bar extending full-width of the ribbon appears on the ink ribbon.

- 4 Insert the ink ribbon cassette firmly until it stops.



- 5 Close the front panel.



Notes

When using ink ribbon cassettes:

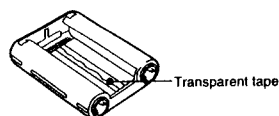
- Once an ink ribbon has been completely used, replace it. Ink ribbon cassettes are not reusable.
- Do not touch the ribbon or place the cassette in a dusty place. Body oils or dust stuck to the ink ribbon will cause imperfect printing.

When storing ink ribbon cassette:

- Avoid placing the ink ribbon cassette in a location subject to:
 - high temperatures
 - high humidity
 - excessive dust
 - direct sunlight
- Store a partially used ink ribbon in its original bag.

If your ink ribbon should tear

Repair the tear with transparent tape. There should be no problem in using the remaining portion of the ribbon.



Transparent tape

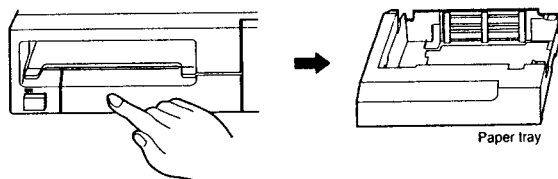
Loading Paper

Follow these steps to load paper in the printer. Use only the ink ribbon cassette and paper packed in the same carton, that is correctly in pairs. Be careful not to touch the printing surface.

Note

When loading the paper while the printer is operating, do not turn off the power. If you turn off the power, the image stored in memory will be lost.

- 1 Push PUSH on the paper tray.
The paper tray is ejected.

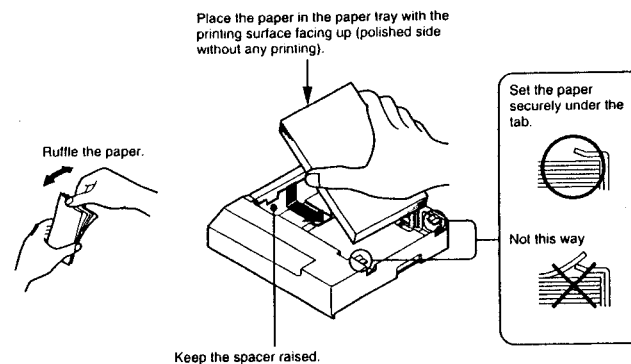


Paper tray

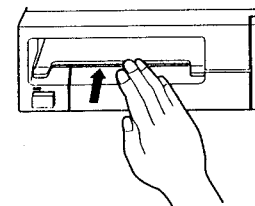
- 2 Place the paper into the paper tray.

Notes

- The paper tray holds up to 100 sheets. When you add paper to a partly-full tray, be careful that the total number of sheets does not exceed 100. If you exceed this limit, paper jams may occur.
- Load the paper so that it lays flat in the paper tray.
If the paper is curled, it will overflow the paper tray and the printing position may shift. If this happens, load fewer sheets in the paper tray.



- 3 Slide the paper tray back into the printer until it clicks into place.



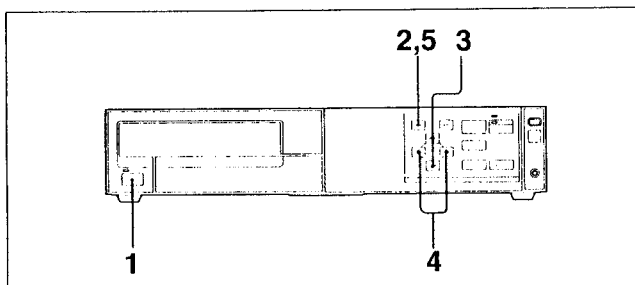
Notes

When storing paper:

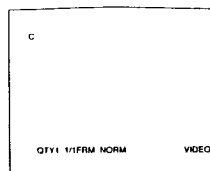
- Avoid placing the paper subject to:
 - high temperatures
 - high humidity
 - excessive dust
 - direct sunlight
- Keep the package for storing unused paper.

Selecting the Input Signal

Before printing, select the input signal. Once you have selected the input signal, this setting remains as is until you select another source.

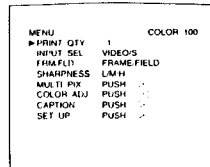


- 1 Turn on the video monitor and the printer.
The following message appears when the printer is ready to operate.

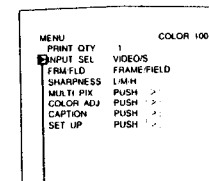


- 2 Press the MENU button.
The right screen appears.

Main Menu screen

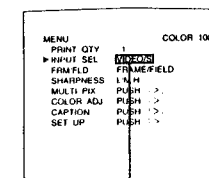


- 3 Select INPUT SEL by pressing the \wedge or \vee button.



Move the cursor to INPUT SEL by pressing the \wedge or \vee button.

- 4 Select the desired input signal by pressing the $<$ or $>$ button.



Switch the desired input signal to green by pressing the $<$ or $>$ button.
The name of the selected input signal appears in green.

Video monitor
(The name of the selected input signal appear on the screen.)

Source signal of the image to be printed

V \rightarrow VIDEO

Signal from the video equipment connected to the VIDEO INPUT connector

S \rightarrow S-VIDEO

Signal from the video equipment connected to the S-VIDEO INPUT connector

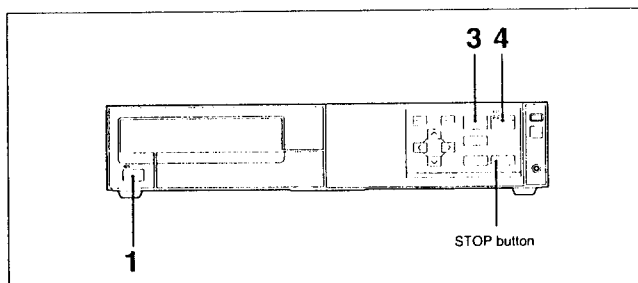
- 5 Press the MENU button.
The regular screen appears.

1-5. MAKING FULL-SIZE PRINTOUTS

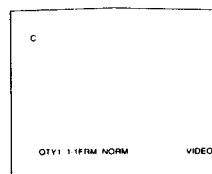
This section explains how to make a full-size printout. The operations described here is the basic procedure for making a printout.

Before making a full-size printout

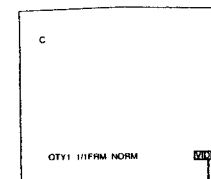
- All connections should have already been made. (see page 39)
- Ensure that the appropriate ink ribbon cassette/paper set is being used and that they are correctly loaded. (see pages 8, 10 and 64)
- Select the input signal to be used to make a printout. (page 12)
- Set the memory mode to store one full-size image into memory. (see page 27)
- Select the appropriate memory page. (see page 25)
- Set the print mode to make a printout of one normal full-size image. (see page 29)



- 1 Turn on the video monitor and the printer.
The right message appears when the printer is ready to operate.

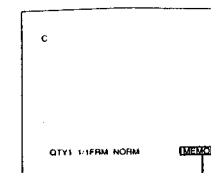


- 2 Start the video source.
(This operation is done using the controls of the video equipment acting as the source.)



Shows that the image from the video equipment are displayed on the screen.

- 3 Press the MEMORY IN button at the instant when the image you want to print appears on the screen.
That image is stored into memory.
The memory image (stored into memory) is displayed on the screen.



Shows that the images stored into memory is displayed on the screen.

If the stored image is blurred

A quickly moving image may be blurred when it is printed. If this happens, switch the FRM/FLD (frame/field) mode setting to FLD on the main menu and perform printing again. This should eliminate blur from the printout. However, since printing in field mode has a lower resolution than in the frame mode, the ultimate print quality will be slightly degraded. (see "About Memory" page 23)

To change the stored image

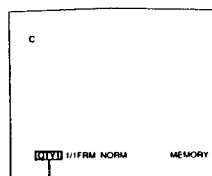
- ① Press the SOURCE/MEMORY button.
The image from the video source appears.
- ② Press the MEMORY IN button at the instant when the image you want to print appears.
The previous image is replaced.

Note

If you turn off the power, the image stored into memory will be lost. Thus, store the image into memory again when you turn on the power.

Continue to next page →

- 4 Press the PRINT button.
It takes about 60 seconds to make a color printout, or 30 seconds to make a black and white printout.



Blinks while printing.
During color printing: Printing start → yellow → magenta → cyan → printing end
During black and white printing: Printing start → white → printing end

Notes

- Do not handle the paper until printing has been completed.
- Do not open the front panel while the printer is printing. Doing so may produce an unsatisfactory printout.

To stop printing before completion

Press the STOP button. Printing is abandoned and the paper is ejected to the print tray.

If the printer does not print

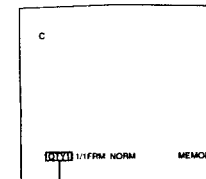
The printer will not print in the following case.

Wherever an error message is displayed on the video monitor. (see "Error Messages" page 64)

If a black line appears on the printout

Sometimes, a black line appears on the printout, although it does not appear on the video monitor. You can eliminate the black line from the printout. (see "Changing the Printout Area" page 52)

- 4 Press the PRINT button.
It takes about 60 seconds to make a color printout, or 30 seconds to make a black and white printout.



Blinks while printing.
During color printing: Printing start → yellow → magenta → cyan → printing end
During black and white printing: Printing start → white → printing end

Notes

- Do not handle the paper until printing has been completed.
- Do not open the front panel while the printer is printing. Doing so may produce an unsatisfactory printout.

To stop printing before completion

Press the STOP button. Printing is abandoned and the paper is ejected to the print tray.

If the printer does not print

The printer will not print when an error message is displayed on the video monitor. (see "Error Messages" page 64)

If a black line appears on the printout

Sometimes, a black line appears on the printout, although it does not appear on the video monitor. You can eliminate the black line from the printout. (see "Changing the Printout Area" page 52)

Notes

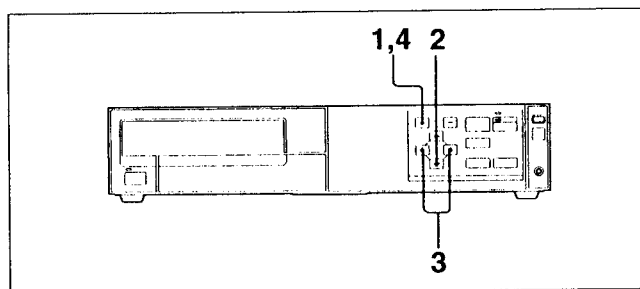
When preserving your printouts:

- Keep printouts in a dark and cool place.
- Do not stick plastic tape to the print. Also avoid leaving plastic eraser on top of the printout or putting the printout between things which contain plasticizer (a desk mat, etc.).
- Do not pour alcohol or other volatile organic solvents on the printouts.

Making Multiple Copies of Identical Image

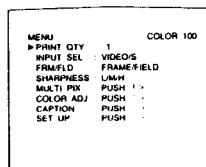
You can print up to 100 copies of a stored image.

Do the following steps before you start printing or while printing. You can change the designated number of copies any time during printing.

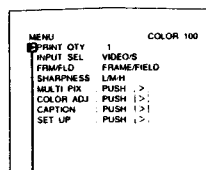


- 1 Press the MENU button.
The right screen appears.

Main Menu screen



- 2 Select PRINT QTY by pressing the \wedge or \vee button.

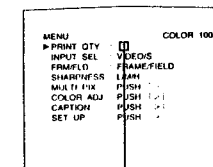


Move the cursor to PRT QTY by pressing the \wedge or \vee button.

Continue to next page →

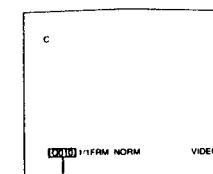
- 3 Set the number of copies by pressing the $<$ or $>$ button.

When setting	Button
To decrease the quantity	$<$
To increase the quantity	$>$



Quantity of copies

- 4 Press the MENU button.
The regular screen appears.



Quantity of copies set in step 3

When paper runs out during printing

Fill the paper tray with paper and press the PRINT button again. (see "Loading Paper" page 10)

Designating the number of copies by the remote control unit

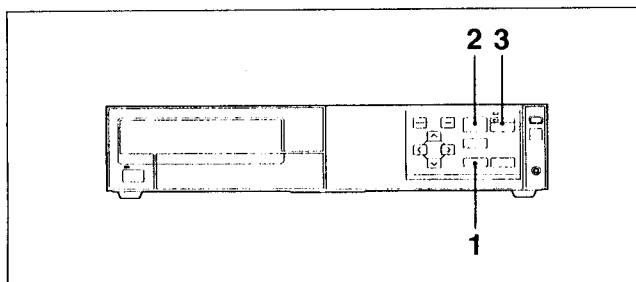
You can designate the number of copies directly on the regular screen.

To increase the number of copies, press the PRINT QTY + button. To decrease the number of copies, press the PRINT QTY - button.

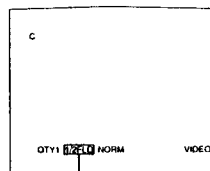
When setting	Button
To decrease the quantity	PRINT QTY -
To increase the quantity	PRINT QTY +

Queuing Images to be Printed

You can store images into the other memory page. These images are printed out as soon as the printer becomes free, provided field mode has been selected.

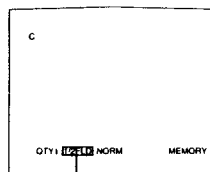


- 1 Select the memory page to be printed by pressing the MEMORY PAGE button.



The available memory page is displayed in white.

- 2 Press the MEMORY IN button at the instant the image you want to print appears on the screen.
- 3 Press the PRINT button. The image selected in step 2 is queued, being printed out as soon as the previous printing job has been completed.



Memory page containing images that have been queued for printing (lights in green). The memory page is again displayed in white once printing has been completed.

Note

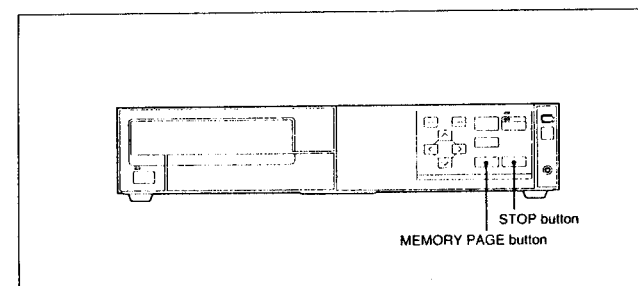
Another image cannot be stored into a memory page containing an image that has been queued for printing.

Deleting Images Stored into Memory Pages

You can delete images that have been stored in the memory pages.

Note

You cannot restore images once they have been deleted.



While holding down the STOP button, press the MEMORY PAGE button. All images are deleted from the memory pages.

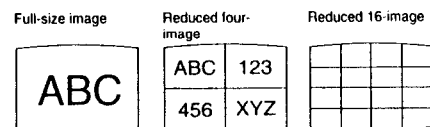
Note

You cannot delete images stored into memory pages by using the supplied remote commander.

1-6. MAKING VARIATIONS OF PRINTOUTS

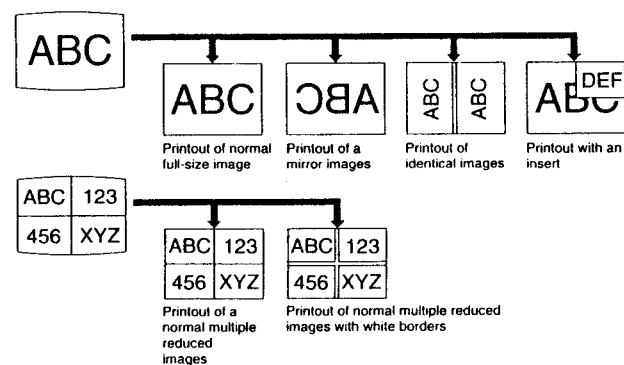
You can store various kinds of images into memory by changing the memory mode and can vary the printout of the stored images by changing the print mode. This section explains how to set the memory mode and change the print mode.

Types of images that can be stored into memory



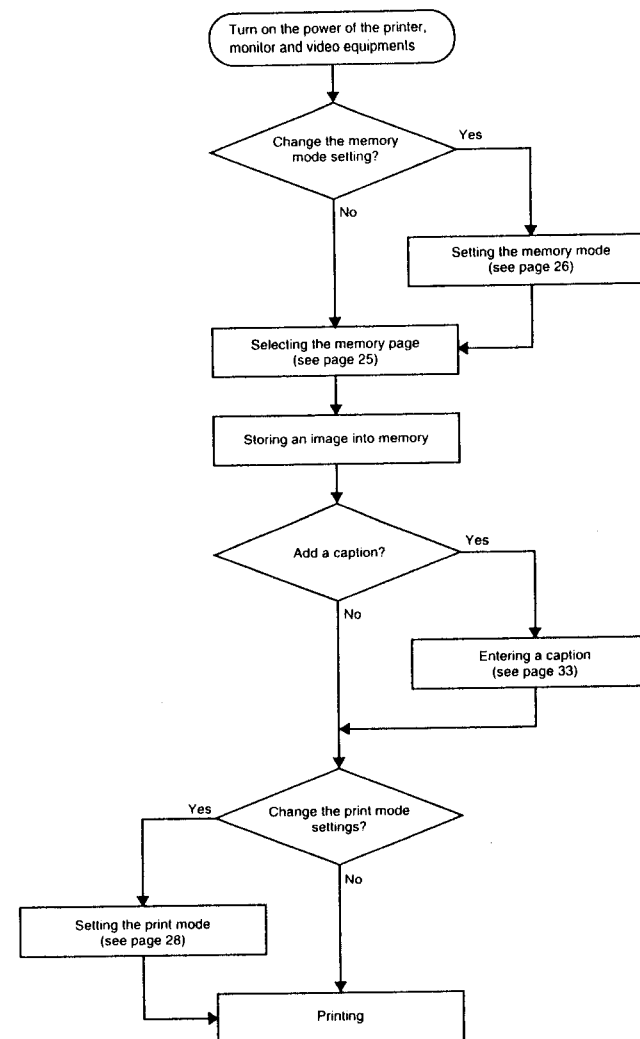
Types of printouts that the printer can produce

By varying the print mode, the following types of printout can be made using images stored in memory.



Printing Operation Flowchart

The following flowchart shows the flow of a printing operation.



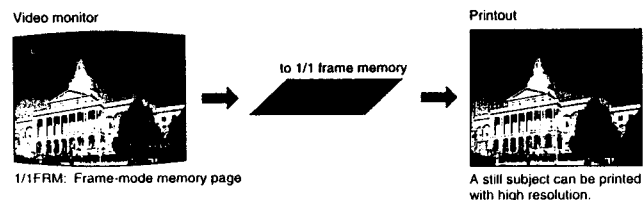
About Memory

To make a printout, it is first necessary to store the desired image into memory. The method of storing images into memory is called memory mode. By setting memory mode, you can store a full-size image or multiple reduced images into memory. Also, you have to decide how to use the printer's memory to store images. Two methods of using memory are supported. One is frame mode, while the other is field mode. The number of memory images you can store depends on whether you select frame or field mode.

Frame mode and filed mode

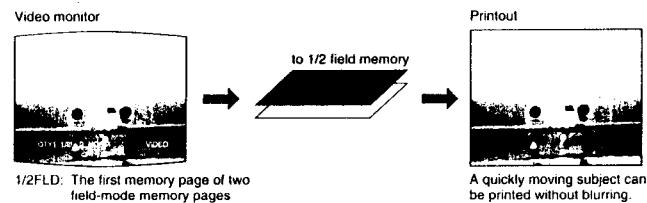
Frame (FRM) mode

Once image is stored in one memory.



Field (FLD) mode

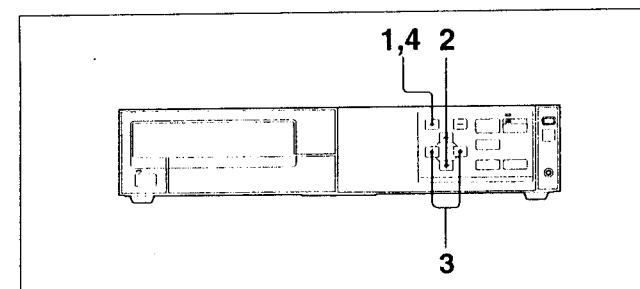
One memory is divided into two, and images for the two screens are stored to the resulting memory pages.



Making Variations of Printouts (continued)

Selecting frame or field mode

Before storing an image, select frame or field mode.



- 1 Press the MENU button.
The following screen appears.

Main Menu screen

MENU	PRINT QTY	1	COLOR 100
▶ INPUT SEL	VIDEO S		
FRM/FLD	FRAME FIELD		
SHARPNESS	L M H		
MULTI PIX	PUSH >		
COLOR ADJ	PUSH >		
CAPTION	PUSH >		
SET UP	PUSH >		

- 2 Select FRM/FLD by pressing the \wedge or \vee button.

MENU	PRINT QTY	1	COLOR 100
▶ INPUT SEL	VIDEO S		
\wedge FRM/FLD	FRAME FIELD		
SHARPNESS	L M H		
MULTI PIX	PUSH >		
COLOR ADJ	PUSH >		
CAPTION	PUSH >		
SET UP	PUSH >		

Move the cursor to FRM/FLD by pressing the \wedge or \vee button.

- 3 Select the desired mode by pressing the $<$ or $>$ button.

MENU	PRINT QTY	1	COLOR 100
▶ INPUT SEL	VIDEO S		
\wedge FRM/FLD	FRAME FIELD		
SHARPNESS	L M H		
MULTI PIX	PUSH >		
COLOR ADJ	PUSH >		
CAPTION	PUSH >		
SET UP	PUSH >		

Switch the desired mode to green by pressing the $<$ or $>$ button.

FRAME: We recommend that, whenever possible, you print in this mode.

FIELD: Select this mode to reduce blurring when you print a quickly moving image.

- 4 Press the MENU button.
The regular screen appears.

About memory pages

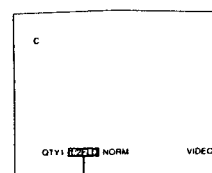
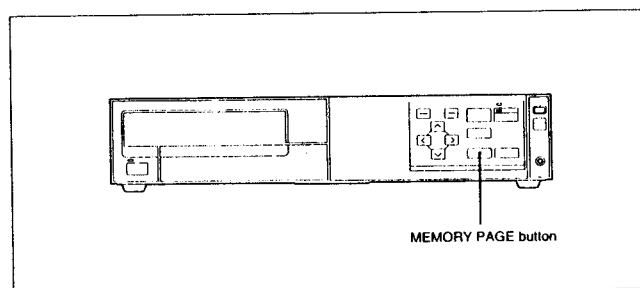
The unit has a single frame memory, enabling the unit to store one image in one memory page when FRM mode is selected, or two images in two memory pages when FLD mode is selected.

The memory used to store one screen image is called a memory page.

Selected memory mode	Number of usable memory pages	Usable memory pages
Frame mode (FRM)	1	1/1FRM
Field mode (FLD)	2	1/2FLD or 2/2FLD

Selecting a memory page

To select a memory page, press the MEMORY PAGE button.



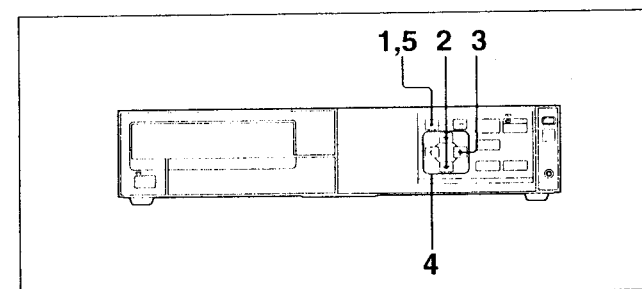
Press the MEMORY PAGE button until the desired memory page appears.

Selecting the Memory Mode

Decide the method for storing images in memory. Once you have selected memory mode, this setting remains as is until reset, even if you turn the power off.

To control the printer remotely by using the remote control unit (supplied)

You can access the MULTI PICTURE sub menu by pressing the MULTI PICTURE button. Thus, press the MULTI PICTURE button to display the MULTI PICTURE sub menu. Then, follow the procedure below, starting from step 4.



- 1 Press the MENU button.
The right screen appears.

Main Menu screen

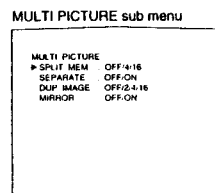
MENU	1	COLOR 100
PRINT QTY	1	
INPUT SEL	VIDEO-S	
FRM.FLD	FRAME FIELD	
SHARPNESS	L.M.H	
MULTI PIX	PUSH >	
COLOR ADJ	PUSH >	
CAPTION	PUSH >	
SET UP	PUSH >	

- 2 Select MULTI PIX by pressing the ^ or v button.

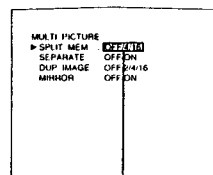
MENU	1	COLOR 100
PRINT QTY	1	
INPUT SEL	VIDEO-S	
FRM.FLD	FRAME FIELD	
SHARPNESS	L.M.H	
MULTI PIX	PUSH >	
COLOR ADJ	PUSH >	
CAPTION	PUSH >	
SET UP	PUSH >	

Move the cursor to MULTI PIX by pressing the ^ or v button.

- 3** Press the > button.
The right screen appears.



- 4** Set the memory mode.
- ① Select the item to be set by pressing the ^ or v button.
 - ② Select the method for storing images by pressing the < or > button.



Switch the desired mode to green by pressing the < or > button.

Item for memory mode	When you select	Settings	Contents of setting
SPLIT MEM	To set the number of images to be stored in one memory page.	OFF	Storing a full-size image
		4	Storing four reduced images
		16	Storing 16 reduced images

- 5** Press the MENU button.
The regular screen appears.

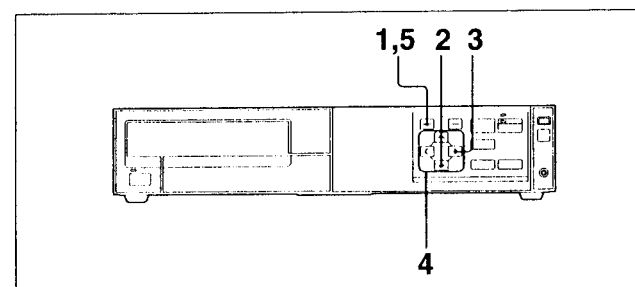
Selecting the Print Mode

You can make variations of printouts from the images stored in memory pages by changing the print mode. (see "Types of printouts that the printer can produce" page 21)

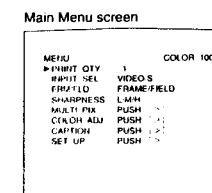
Once you have selected the print mode, this setting remains as is until you reset, even if you turn the power off.

To control the printer remotely by using the remote control unit (supplied)

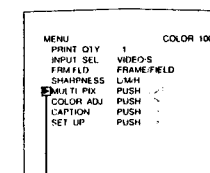
You can access the MULTI PICTURE sub menu by pressing the MULTI PICTURE button. Thus, press the MULTI PICTURE button to display the MULTI PICTURE sub menu. Then, follow the procedure below, starting from step 4.



- 1** Press the MENU button.
The right screen appears.



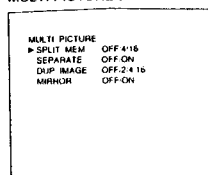
- 2** Select MULTI PIX by pressing the ^ or v button.



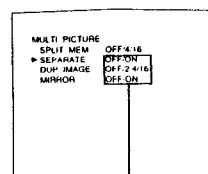
Move the cursor to MULTI PIX by pressing the ^ or v button.

- 3 Press the > button.
The right screen appears.

MULTI PICTURE sub menu



- 4 Set the print mode.
① Select the item to be set by pressing the ^ or v button.
② Select the method for making a printout by pressing the < or > button.



Switch the desired mode to green by pressing the < or > button.

Item for memory mode	When you select	Settings	Content of settings
SEPARATE	To decide whether the images are printed with white borders	OFF	without white borders
		ON	with white borders
DUP IMAGE	To decide how many times identical images are printed in a single printout.	OFF	Printing a memory image one time
		2	Printing a memory image twice.
		4	Printing a memory image four times
		16	Printing a memory image 16 times.
MIRROR	To rotate the image around its vertical axis (to make a mirror image printout)	OFF	Normal image
		ON	Mirror image

Note

When MIR is selected on the CAPTION sub menu, MIRROR is not selected.

- 5 Press the MENU button.
The regular screen appears.

To return to the main menu from the sub menu screen

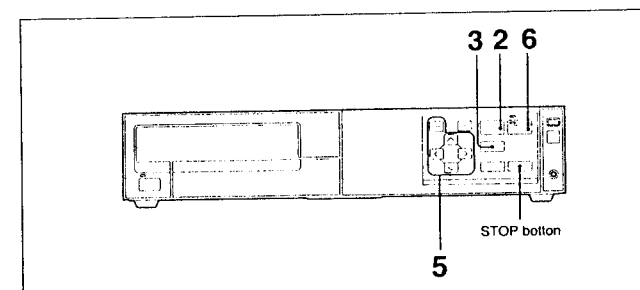
Press the EXEC button except when the SAVE item is selected on the COLOR ADJUST sub menu and when the cursor is position in the character entry area on the CAPTION sub menu.

Making Printouts of Multiple Images

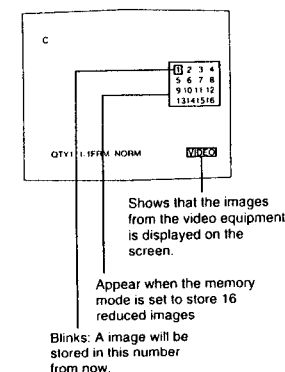
This subsection explains how to make printouts of reduced multiple images taking as an example, making a printout of 16 reduced images. (see "Selecting the Print Mode" page 28)

Before making printouts of 16 reduced images

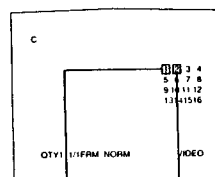
- Set the memory mode to store 16 reduced images into memory. (see page 27)
- Select the appropriate memory page. (see page 25)



- 1 Start the video source.
(This operation is done using the controls of the video equipment acting as the source.)



- 2 Press the MEMORY IN button at the instant when the image you want to print appears on the screen.
The image is stored to the position for which the corresponding number blinks on the monitor display.
The cursor moves to the next number, then blinks.



When an image has been stored into this position, the number lights in green.

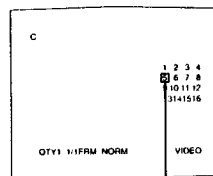
The cursor moves to the next number.

- 3 Press the SOURCE/MEMORY button.
The image from the video equipment appears on the monitor display.
- 4 Repeat steps 2 and 3 until you have stored 16 images.

To change a stored image

Example: When you want to change the image stored to the 5th position

- ① Select 5 by pressing the ^, v, < or > button.
- ② Press the SOURCE/MEMORY button.
The image from the video source appears.
- ③ Press the MEMORY IN button at the instant when the image you want to print appears.
The previously stored image is replaced with the newly selected image.



Move the white blinking cursor to 5 by pressing the ^, v, < or > button.

To skip a previously stored image

When an image has already been stored, the previously stored image can be replaced by pressing the MEMORY IN button. Skip the number corresponding to the image to be skipped by pressing the ^, v, < or > button.

- 5 Set the print mode. (see "Selecting the Print Mode" page 28)
- 6 Press the PRINT button.
The 16 reduced images are printed on one sheet of paper.

To stop printing midway

Press the STOP button. The printer stops printing and ejects paper to the paper cover.

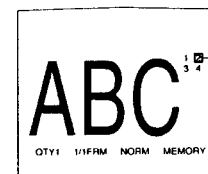
Making Printouts with an Insert

You can make printouts with an insert by using the four- or 16-reduced image memory mode.

To make printouts with an insert, select the memory to FIELD.

Example: To make a printout with one of four reduced images inserted

- 1 Display the full-size image stored in memory. (Follow steps 1 to 3 of "Making Full-Size Printouts" on page 14)
- 2 Set the memory mode to store four reduced images. (see "Selecting the Memory Mode" page 26)
- 3 Move the white blinking cursor to the position where a reduced image is to be inserted, by pressing the ^, v, < or > button.
Example: To insert the image to 2



Move the white blinking cursor to 2.

- 4 Press the SOURCE/MEMORY button to display the image from the video source, if necessary.
- 5 Press the MEMORY IN button at the instant when the image you want to print appears.
The image is stored to position 2.
- 6 Press the PRINT button.
An image with the insert is printed.

Note

If you insert a reduced image into an image stored in a different memory page, the printer can not make a printout of the image with an insert.

1-7. MAKING PRINTOUTS WITH A CAPTION

A caption, such as data or comments, can be added to a printout, using small characters below the image.
You can input up to 60 characters in NARROW size mode, NORMAL size mode, in WIDE size mode.

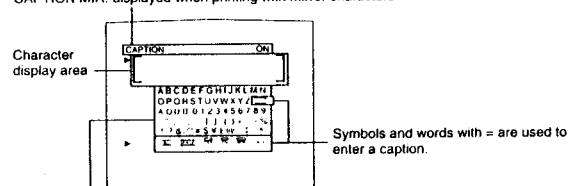
Note

When the printout is printed in field mode, characters may not be printed clearly.

About the CAPTION sub menu

A caption is entered from the CAPTION sub menu. A brief explanation of each item on the CAPTION sub menu, is given below before entering a caption.

CAPTION ON: displayed when printing with a caption
CAPTION OFF: displayed when printing without a caption
CAPTION MIR: displayed when printing with mirror characters



Character entry area
The cursor is positioned at the highlighted character and this highlighted character is to be entered.

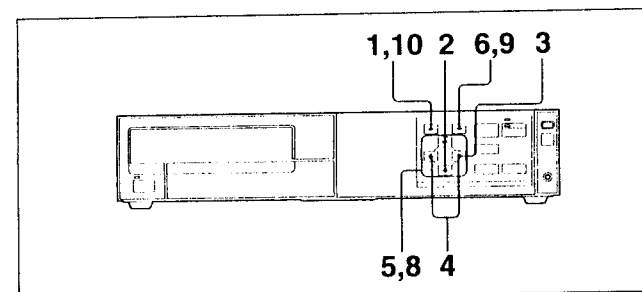
Symbols and words with = used to enter a caption.

Monitor display	Function
SPACE	One space
BS	One backspace
OFF	Selecting to print without a caption
ON	Selecting to print with a caption
MIR	Selecting to print with a mirror caption
SHIFT ^{a)}	Selecting either capital letters or lower-case letters
SAVE	Storing the entered caption

- a) By highlighting SHIFT and pressing the EXEC button, capital letters are changed to lower-case letters, or lower-case letters are changed to capital letters.

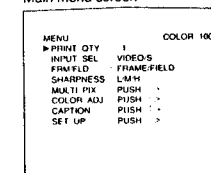
Entering a Caption

Enter a caption as follows. The setting remains valid until you enter a new setting - even if you turn the power off.

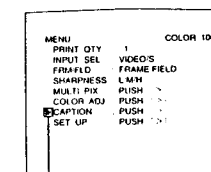


- 1 Press the MENU button.
The right screen appears.

Main menu screen



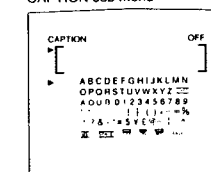
- 2 Select CAPTION by pressing the ^ or v button.



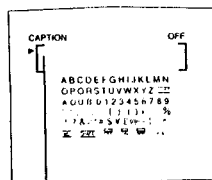
Move the cursor to CAPTION by pressing the ^ or v button.

- 3 Press the > button.
The right screen appears.

CAPTION sub menu

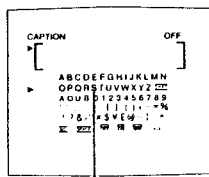


- 4 Select the position where you want to enter the character in the character display area by pressing the < or > button.



The cursor □ is highlighted at the selected position on the monitor display.

- 5 Select the character you want to enter by pressing the ^, v, < or > button.
Example: To select S



Highlight S.

- 6 Press the EXEC button.

The selected character appears at the position highlighted on the character display area, then the highlighted [] moves to the next position.

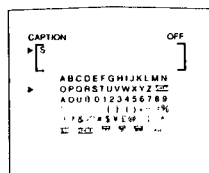
When you enter a wrong character

Select BS by pressing the ^, v, < or > buttons, then press the EXEC button. The character to the left of highlighted character will be deleted.

- 7 Repeat steps 4, 5 and 6 to enter the remaining characters of the caption.

To make a space

- ① Move the highlighted [] to the position where you want to make a space.
- ② Select SPACE by pressing the ^, v, < or > button.
- ③ Press the EXEC button.
The one space is made and the cursor moves to the next position.

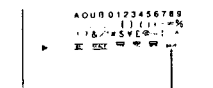


To replace a previously entered character without changing the number of characters

You can replace a previously entered character with a new one.

- ① Move the cursor to the character which you want to replace by the operation in step 4.
- ② Enter the correct character over the wrong character by the operations in step 5 and 6.
The previously entered character is replaced with the new one.

- 8 Select SAVE by pressing the ^, v, < or > button.



Highlight SAVE.

- 9 Press the EXEC button.
The message "PLEASE WAIT" appears while the entered characters are being stored. Once they have been stored, the message disappears and the CAPTION sub menu appears again.

- 10 Press the MENU button.
The regular screen appears.

Note

The message "PLEASE WAIT" appears when it is not allowed to operate the printer or to operate the printer remotely by using the remote commander. Do not operate the printer while "PLEASE WAIT" is being displayed.

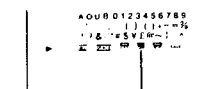
If "PLEASE WAIT" does not disappear

If "PLEASE WAIT" remains on the screen, turn the printer power off once and turn the printer power on again. You can operate the printer.

Making printouts with a caption

Display the CAPTION input screen. (see "Entering a Caption" page 34)

- 1 Select ON by pressing the ^, v, < or > button.



- 2 Press the EXEC button.

Highlight ON.

Making a printouts without a caption

Select OFF in the above step 1.

Continue to next page →

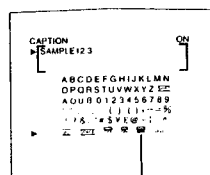
Making a printout with a mirror caption

Display the CAPTION input screen. (see "Entering a Caption" page 32)

Note

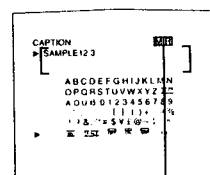
To select MIR on the CAPTION sub menu, the setting of MIRROR on the MULTI PICTURE sub menu should be set to MIRROR ON. Otherwise, if you select MIR on the CAPTION sub menu with setting to MIRROR OFF on the MULTI PICTURE sub menu, error tone sounds three times.

- 1 Select MIR by pressing the Δ , ∇ , $<$ or $>$ button.



Highlight MIR.

- 2 Press the EXEC button.



MIR is displayed.

To return the print mode to the one with normal caption

- ① Select ON by pressing the Δ , ∇ , $<$ or $>$ button.
- ② Press the EXEC button.

To return to the regular screen

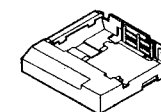
Press the MENU button.

1-8. SUPPLIED ACCESSORIES

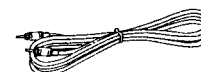
Remote control unit (1)



Paper tray (1)



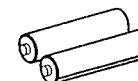
Connecting cable for remote control unit (1)



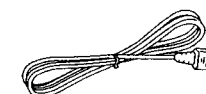
Paper cover (1)



Dry batteries (2)



AC power cord (1)



Color printing pack (1)
Warranty card (1)
Operating instructions (1)

1-9. CONNECTIONS **UP-1200A**

To enable printing, video equipment to act as an input signal source, and a video monitor to enable you to view images or menus, must be connected. The following diagrams illustrate how to make the input, output and remote control connections. Use as a guide when connecting the necessary signals to and from the equipment to be used for printing.

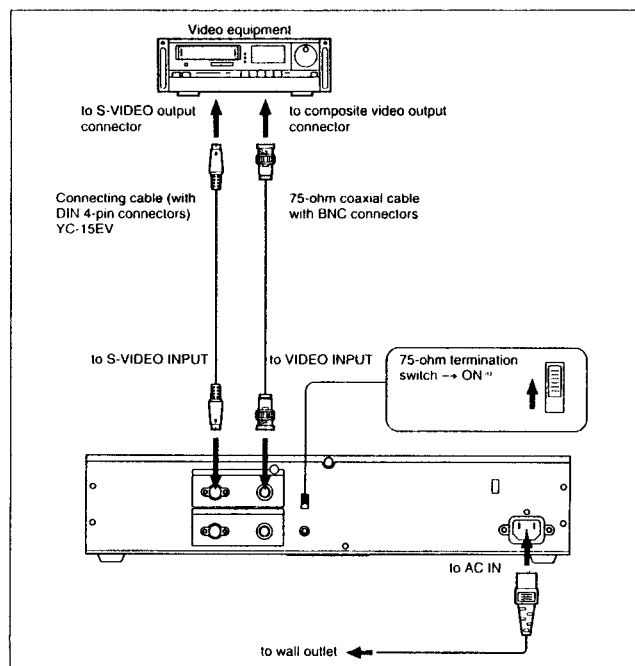
Notes

When connecting:

- Turn off the power of each device before attempting to make any connections.
- Connect the AC power cord last.

Making Connections for Storing Video Images

Connect the video equipment for storing the video images to be printed. Connect the necessary video equipment which will be used in actual printing, using the following diagram as a guide.



- a) Normally, set this switch to ON. Set it to OFF if the level of the input signal drops if you connect additional video equipment.

UP-1200AEPM

To enable printing, video equipment to act as an input signal source, and a video monitor to enable you to view images or menus, must be connected. The following diagrams illustrate how to make the input, output and remote control connections. Use as a guide when connecting the necessary signals to and from the equipment to be used for printing.

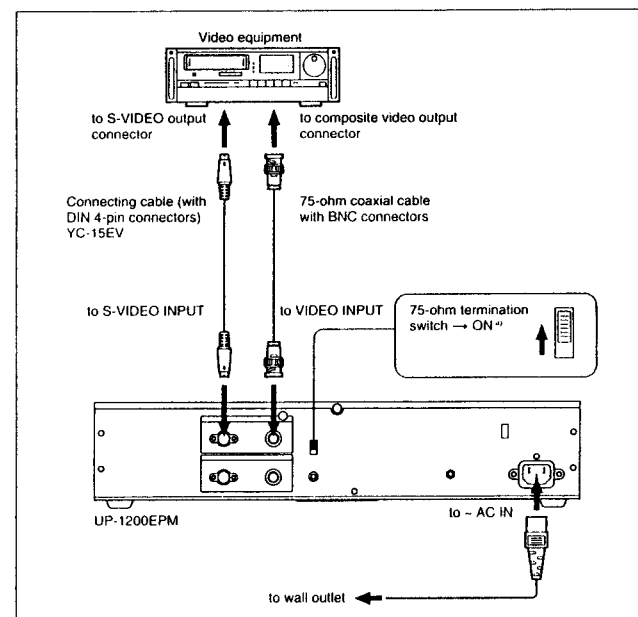
Notes

When connecting:

- Turn off the power of each device before attempting to make any connections.
- Connect the AC power cord last.

Making Connections for Storing Video Images

Connect the video equipment for storing the video images to be printed. Connect the necessary video equipment which will be used in actual printing, using the following diagram as a guide. Before connecting the video equipment, see "Important safeguards/notices for use in the medical environment" on page 2.

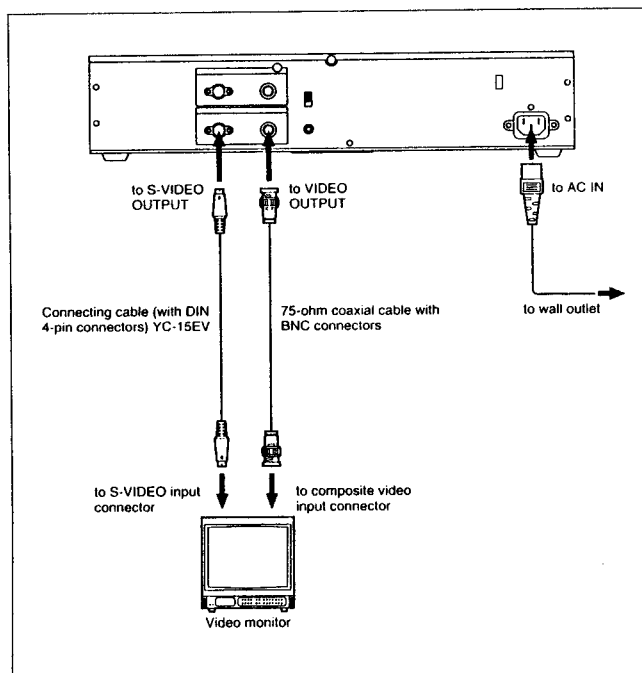


- a) Normally, set this switch to ON. Set it to OFF if the level of the input signal drops when you connect additional video equipment.

UP-1200A

Making Connections for Viewing Images to be Printed on the Video Monitor

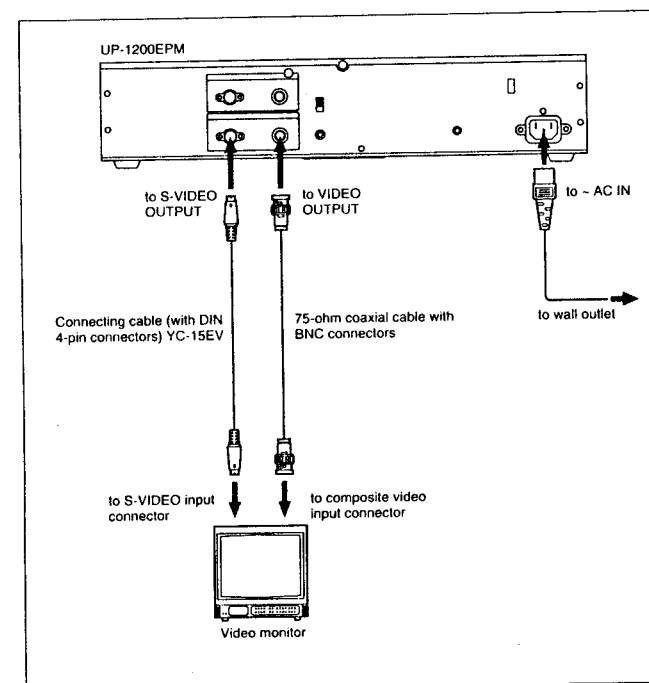
Connect a video monitor to view stored images and to check those to be printed. Connect the necessary video monitor which will be used in actual printing, using the following diagram as a guide.



UP-1200AEPM

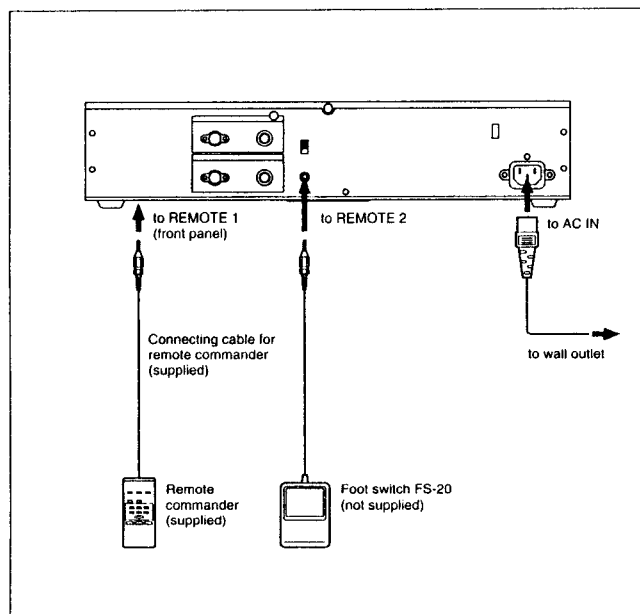
Making Connections for Viewing Images to be Printed on the Video Monitor

Connect a video monitor to view stored images and to check those to be printed. Connect the necessary video monitor which will be used in actual printing, using the following diagram as a guide. Before connecting the video monitor, see "Important safeguards/notices for use in the medical environment" on page 2.



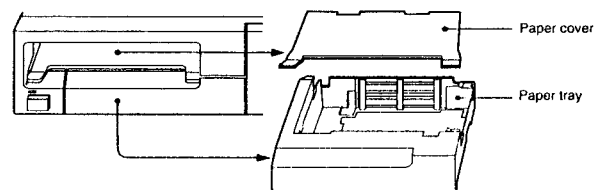
Making Connections to Enable Remote Control

The printer can be controlled remotely by connecting the remote commander (supplied) or foot-switch (not supplied) (see "Preparing the Remote Commander" page 42).



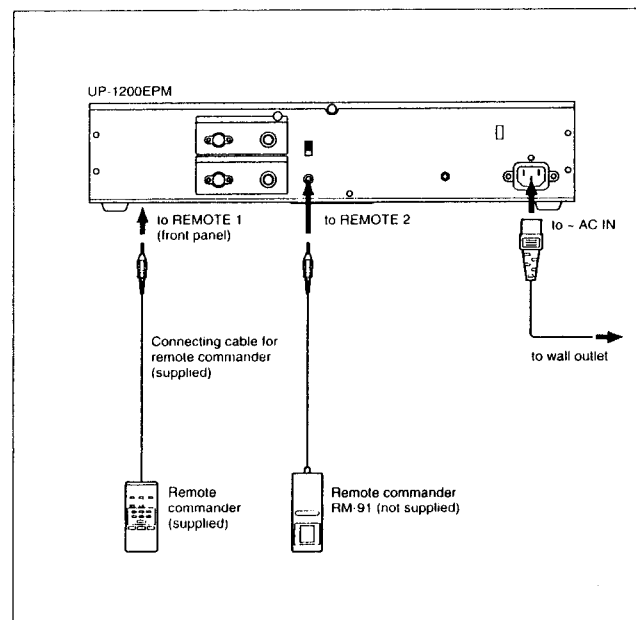
Assembly

Mount the supplied paper tray and paper cover.



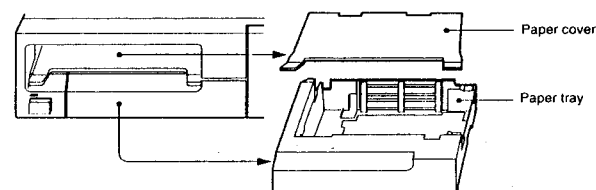
Making Connections to Enable Remote Control

The printer can be controlled remotely by connecting the remote commander (supplied) or the RM-91 remote commander (not supplied) (see "Preparing the Remote Control Units" page 42).



Assembly

Mount the supplied paper tray and paper cover.



1-10. PREPARING THE REMOTE COMMANDERS

UP-1200A

You can control the printer remotely by using the remote control unit (supplied) or the foot switch (not supplied).

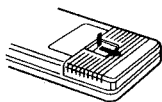
Using the Supplied Remote Commander

The remote control unit can be used either as a wireless type or wired type. The buttons on the remote control unit duplicate those on the front panel of the printer, except for the PRINT QTY button, COLOR ADJUST button and MULTI PICTURE button. (see "Remote Commander" page 72)

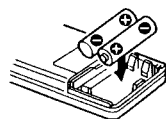
Inserting batteries

Install the batteries in the remote commander before using it.

- 1 Remove the battery compartment cover.



- 2 Insert the two supplied SUM-3 1.5 V batteries. Note the polarity. Be careful to insert the batteries correctly.



- 3 Replace the cover.

Battery life

The battery life depends on how much you use the remote control unit. On average, batteries last for about 6 months. Install fresh batteries as soon as you notice the unit's range becoming shorter.

Notes

When using the batteries:

- Remove the batteries from the remote control unit if you do not intend to use it for an extended period of time. The batteries may leak if you leave them in the remote control unit.
- Should the batteries leak, clean the battery case thoroughly with a soft cloth and install fresh batteries.
- Be careful to insert the batteries correctly. Note the polarity, as indicated inside the battery compartment.
- Replace exhausted batteries with fresh ones. Never mix a fresh battery with a used battery or with a different kind of battery.

UP-1200AEPM

You can control the printer remotely by using the remote commander (supplied) or the remote commander (not supplied).

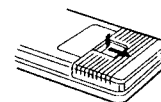
Using the Supplied Remote Commander RM-5100

The remote commander can be used either as a wireless type or wired type. The buttons on the remote commander duplicate those on the front panel of the printer, except for the PRINT QTY button, COLOR ADJUST button and MULTI PICTURE button. (see "Remote Commander RM-5100" page 72)

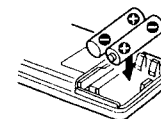
Inserting batteries

Install the batteries in the remote commander before using it.

- 1 Remove the battery compartment cover.



- 2 Insert the two supplied 1.5 V batteries (R6). Note the polarity. Be careful to insert the batteries correctly.



- 3 Replace the cover.

Battery life

The battery life depends on how much you use the remote commander. On average, batteries last for about 6 months. Install fresh batteries as soon as you notice the unit's range becoming shorter.

Notes

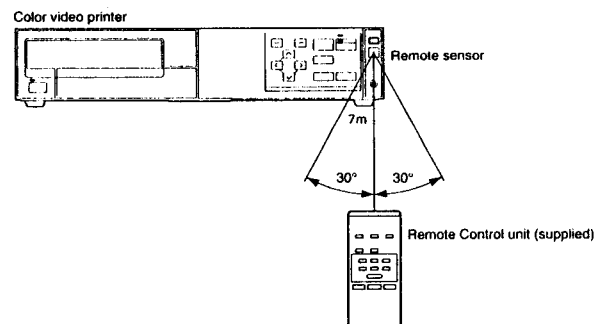
When using the batteries:

- Remove the batteries from the remote commander if you do not intend to use it for an extended period of time. The batteries may leak if you leave them in the remote control unit.
- Should the batteries leak, clean the battery case thoroughly with a soft cloth and install fresh batteries.
- Be careful to insert the batteries correctly. Note the polarity, as indicated inside the battery compartment.
- Replace exhausted batteries with fresh ones. Never mix a fresh battery with a used battery or with a different kind of battery.

UP-1200A

Using the supplied remote control unit

When using the remote control unit as a wireless unit, aim the head of the remote control unit of the remote sensor on the printer. With fresh batteries, the range of the remote control unit is about 7 meters.



Using the Foot Switch

The foot switch (not supplied) allows you to make prints free-handed.

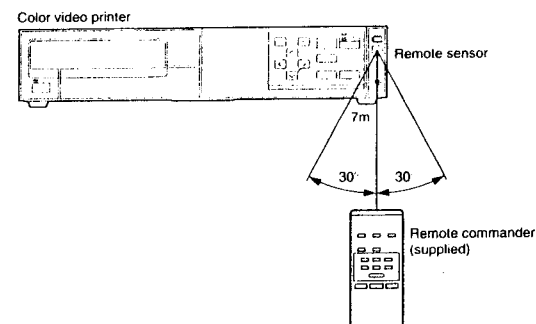
Operation

At the instant when the image you want to print is displayed on the monitor, press the foot switch. The subsequent operation of the printer will depend on the remote operation setting with the corresponding menu. (see "Selecting Operation Mode for Automatic Printing Capabilities" page 54) The printer operation, also, can be controlled remotely by sending a pulse signal to the REMOTE 2 connector. (see "Specifications" page 65)

UP-1200AEPM

Using the supplied remote commander

When using the remote commander as a wireless unit, aim the head of the remote control unit of the remote sensor on the printer. With fresh batteries, the range of the remote commander is about 7 meters.



Using the Remote Commander (Not Supplied)

The RM-91 remote commander (not supplied) allows you to make printouts remotely.

Operation

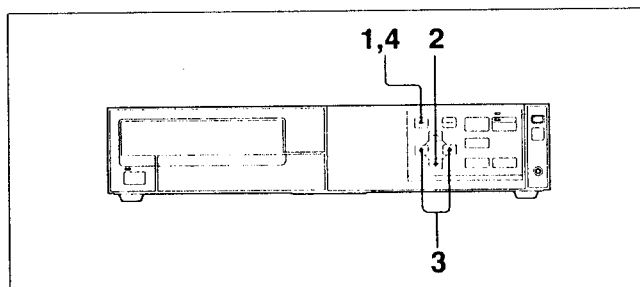
At the instant when the image you want to print is displayed on the monitor, press the switch of the remote commander. The subsequent operation of the printer will depend on the remote operation setting with the corresponding menu. (see "Selecting the Operation Mode for Automatic Printing Capabilities" page 54) The printer operation, also, can be controlled remotely by sending a pulse signal to the REMOTE 2 connector. (see "Specifications" page 65)

1-11. ADJUSTING THE PRINTOUT QUALITY

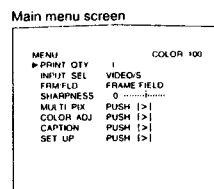
You can adjust the printout quality, including its sharpness and color (intensity and contrast) and store these settings by using the menu. The setting remains as is until reset - even if you turn off the power.

Adjusting the Sharpness

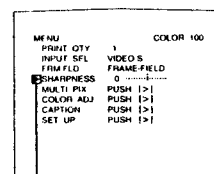
You can set the printout sharpness to one of 16 levels. A printout will appear softer or sharper depending on the definition of the subject outline. The image on the monitor is not affected by changing the sharpness setting. This adjustment affects only the quality of the printout. The setting remains as is until reset - even if you turn off the power.



- 1 Press the MENU button.
The right screen appears.



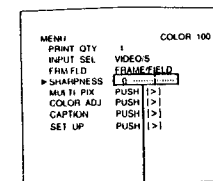
- 2 Select SHARPNESS by pressing the Δ or ∇ button.



Move the cursor to SHARPNESS by pressing the Δ or ∇ button.

- 3 Select desired sharpness by pressing the $<$ or $>$ button.

Desired sharpness	Direction
Soft outline	to the $-$ direction
Normal outline	Centered (0 position)
Sharp outline	to the $+$ direction



The number and the corresponding sharpness increases by pressing the $>$ button.
The number and the corresponding sharpness decreases by pressing the $<$ button.

- 4 Press the MENU button.
The regular screen appears.

Adjusting the Printout Color

This subsection explains how to adjust the printout color. You can adjust the color intensity (RED/GREEN/BLUE) and contrast (DARK/LIGHT). The new setting remains as is until reset - even if you turn off the power.

You can store up to three settings. These settings are managed according to a LOAD number. The color intensity and picture contrast of a printout are determined by recalling one of the three settings according to their LOAD numbers. The printer retains these settings even if you turn off the power. This is useful when you are using more than one video equipment, each of a different quality, and when you want to print images having different color qualities and picture contrasts.

Also, you can make a printout using temporarily set values, without erasing the stored adjustment values.
Perform the adjustments while viewing the images stored in memory.

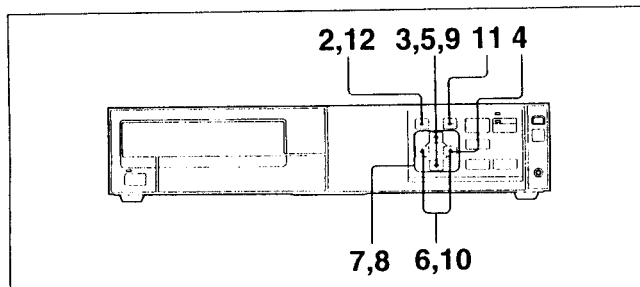
Factory-set values of LOAD numbers 1, 2 and 3 in the COLOR ADJUST sub menu

For UP-1200, all values are factory-set to 0 for LOAD numbers 1, 2 and 3. For UP-1200A, all values are factory-set to 0 for LOAD numbers 1 and 3. Values for LOAD number 2, however, are factory-set as follows: RED is set to -3, GREEN to -3, BLUE to -3, DARK to +3 and LIGHT to 0. By selecting LOAD number 2 under the factory-setting, you can make a printout in the same printout color as the one of the UP-1200 where RED, GREEN, BLUE, DARK and LIGHT are set to 0.

When you control the printer using the remote control unit (supplied)

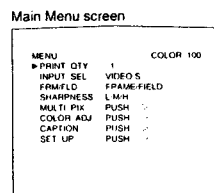
You can directly access the COLOR ADJUST sub menu from the regular screen by pressing the COLOR ADJUST button. Therefore, press the COLOR ADJUST button first. Then, perform the operation from step 5 of the following procedure.

Continue to next page \rightarrow

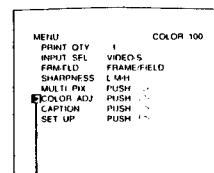


1 Display the image stored in monitor for adjustment.

2 Press the MENU button. The right screen appears.

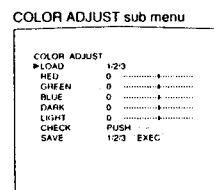


3 Select COLOR ADJ by pressing the Δ or ∇ button.

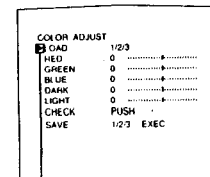


Move the cursor to COLOR ADJ by pressing the Δ or ∇ button.

4 Press the \triangleright button. The right screen appears.

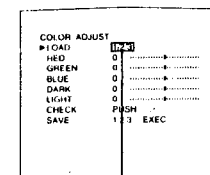


5 Select LOAD by pressing the Δ or ∇ button.



Move the cursor to LOAD by pressing the Δ or ∇ button.

6 Select the LOAD number of the value to be adjusted or to be modified by pressing the \lt or \gt button.



When modifying, you can preserve the original settings. (see "To preserve the original set value" page 47)

Switch the desired LOAD number to green by pressing the \lt or \gt button

7 Adjust the printout color.

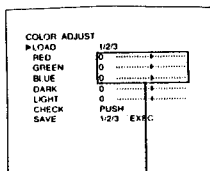
- ① Select the item to be set by pressing the Δ or ∇ button.
- ② Perform the adjustment by pressing the \lt or \gt button.

Adjustment item		Contents of setting
Color intensity	RED	Adjusting the red component of the image
	GREEN	Adjusting the green component of the image
	BLUE	Adjusting the blue component of the image
Color contrast	DARK	Adjusting the dark area of an image
	LIGHT	Adjusting the light area of an image

The RED, GREEN and BLUE color components and the contrast are divided into to 16 scales from -8 to +7, as indicated by a value and graph. And the center of the graph corresponds to the standard color.

Continue to next page \rightarrow

When adjusting RED/ GREEN/BLUE



The intensity increases in the + direction by pressing the > button. The intensity decreases in the - direction by pressing the < button.

Once you have changed the value

Once you have changed the value, TEMP (TEMPORARY) appears to the right of the LOAD item. TEMP indicates that the setting is temporary and not stored.

- 8 After you have made all necessary adjustments, check your presettings.

① Select CHECK by pressing the ^ or v button.

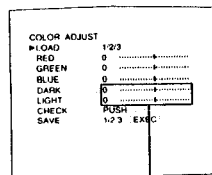
② Press the > button.

For as long as you keep the > button held down, the display does not appear on the screen.

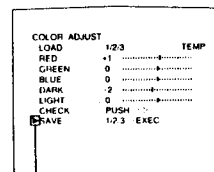
You can make a printout with the settings made as above. Go to step 12 to make a printout. However, this setting is cleared when you turn the printer off or you select another preset. To store a new setting, go to the next step.

- 9 Select SAVE by pressing the ^ or v button.

When adjusting DARK/ LIGHT



The contrast in the dark area or light area is strengthened in the + direction by pressing the > button. The contrast in the dark area or light area is weakened in the - direction by pressing the < button.



Move the cursor to SAVE by pressing the ^ or v button.

- 10 Select the SAVE number to which new settings are to be stored by pressing the < or > button.

To preserve the original set value

Select the SAVE number which differs from the LOAD number selected in step 6.

- 11 Press the EXEC button.

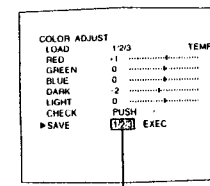
The settings have been registered to the SAVE number selected in step 10. TEMP disappears from the LOAD item.

- 12 Press the MENU button.

The regular screen appears.

To recall settings

You can recall previously set values by selecting the LOAD number. The values are stored to SAVE numbers in steps 10 and 11. This SAVE number is the LOAD number for this setting.



Switch the desired SAVE number to green by pressing the < or > button.

1-12. PRINTER INITIAL SETUP

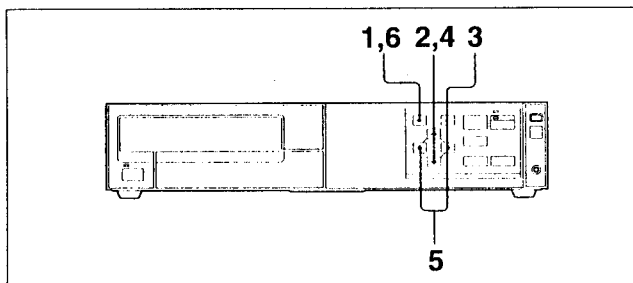
You can set up the following, using the on-screen menu.

- Setting the printout size (see page 50)
- Changing the printout area (see page 52)
- Selecting the operation mode for automatic printing capabilities (see page 54)
- Erasing the screen display (see page 56)
- Viewing images from connected video equipment on the video monitor (see page 58)
- Selecting images on the video monitor after storing the video image into memory (see page 60)

Setting the Printout Size

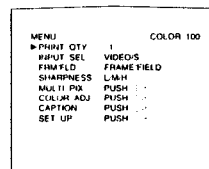
When you print an image that is narrower or wider than the standard screen size, the black frame may be printed or the image may be partially cut. In such a case, you can change the screen size.

The printer supports the following three sizes, NA (NARROW), NO (NORMAL) and W (WIDE).

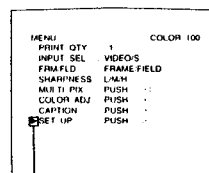


- 1 Press the MENU button.
The right screen appears.

Main Menu screen



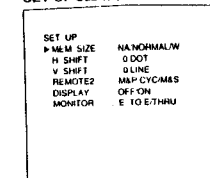
- 2 Select SET UP by pressing the \wedge or \vee button.



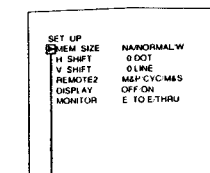
Move the cursor to SET UP by pressing the \wedge or \vee button.

- 3 Press the \rightarrow button.
The right screen appears.

SET UP sub menu

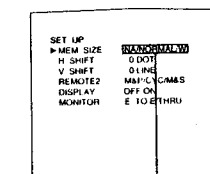


- 4 Select MEM SIZE by pressing the \wedge or \vee buttons.



Move the cursor MEM SIZE by pressing the \wedge or \vee button.

- 5 Select the desired size by pressing the $<$ or $>$ buttons.



Switch the selected size to green.
The selected size appears in green.

When changing	Printout size	Size (dots \times line)
When a black frame is printed.	NA (NARROW)	708 (H) \times 448 (V)
Normal	NO (NORMAL)	720 (H) \times 472 (V)
When an image is partially cut	W (WIDE)	772 (H) \times 488 (V)

- 6 Press the MENU button.
The regular screen appears.

Note

To change the printout size, turn the power off after removing from the SET UP sub menu (after completing step 6 in the above operation procedures). If you keep the power on, the former setting remains.

To check the adjustment result

Store a new image to the memory and print it to check whether the black frame disappears.

Changing the Printout Area

The black line may be printed on the printout although it does not appear on the video monitor. The portion where no video signal exists is printed in black. This may occur when you make printouts after you connect a different video source or play back different video software. In such a case, you can adjust the printout area by moving the screen horizontally and vertically.

When the black line is on the right



When the black line is on the left



When the black line is at the top

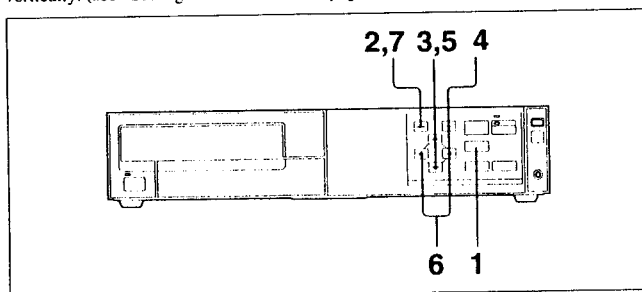


When the black line is at the bottom



Note

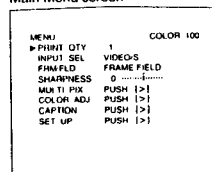
When the printout size is set to WIDE, the screen size cannot be adjusted vertically. (see "Setting the Printout Size" page 50)



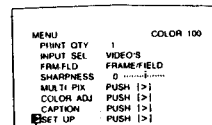
1 When the memory image is displayed on the screen, press the SOURCE/MEMORY button.
The image from the video source appears.

2 Press the MENU button.
The right screen appears.

Main Menu screen



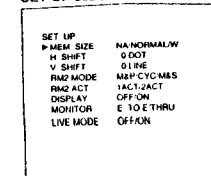
3 Select SET UP by pressing the ^ or v button.



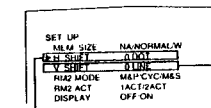
Move the cursor to SET UP by pressing the ^ or v button.

4 Press the > button.
The right screen appears.

SET UP sub menu



5 Select H SHIFT by pressing the ^ or v buttons, when the black line appears on the right or left.
Select V SHIFT by pressing the ^ or v buttons, when the black line is at the top or bottom.



When the black line is on the right or left When the black line is at the top or at the bottom

6 Adjust the horizontal value or vertical value by pressing the < or > button.

Item selected in step 5	The position where the black line appears	Button to be used	Operation
H SHIFT (horizontal direction)	On the right	> button	Shifting the image to the right by up to 14 dots in step 2 dots
	On the left	< button	Shifting the image to the left by up to 14 dots in step 2 dots
V SHIFT (vertical direction)	At the top	> button	In frame mode, shifting the image up by up to 6 lines in step 2 lines In field mode, shifting the image up by up to 3 lines in step 1 line.
	At the bottom	< button	In frame mode, shifting the image down by up to 6 lines in step 2 lines In field mode, shifting the image down by up to 3 lines in step 1 line.

7 Press the MENU button.
The regular screen appears.

To check the adjustment result

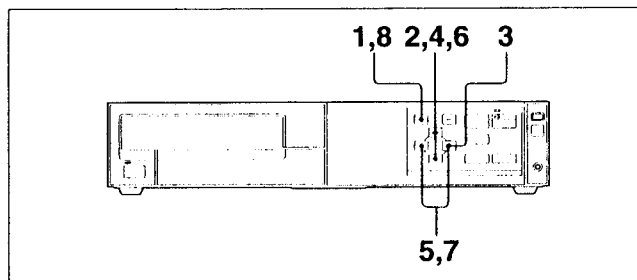
Any black line is also stored in memory with the previous image. Thus, store a new image to the memory and print it to check whether the black line disappears.

Note

When a black line still remains even after adjusting H SHIFT or V SHIFT, change the printout size. (see "Setting the Printout Size" page 50)

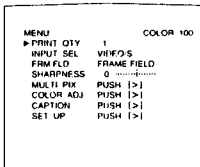
Selecting the Operation Mode for Automatic Printing Capabilities

You can control the printer with the RM-91 remote commander connected to the REMOTE 2 connector on the rear panel. In addition to the above, the printer can be remotely controlled by the pulse signal input to REMOTE 2. (see page 65)

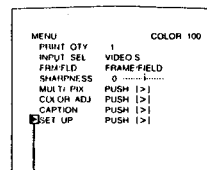


- 1 Press the MENU button. The right screen appears.

Main Menu screen



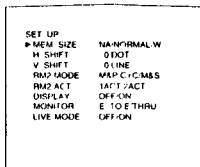
- 2 Select SET UP by pressing the \wedge or \vee button.



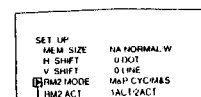
Move the cursor to SET UP by pressing the \wedge or \vee button.

- 3 Press the $>$ button. The right screen appears.

SET UP sub menu

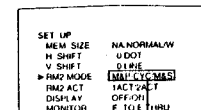


- 4 Select RM2 MODE by pressing the \wedge or \vee button.



Move the cursor to RM2 MODE by pressing the \wedge or \vee button.

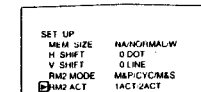
- 5 Select the desired operation method by pressing the $<$ or $>$ button.



Switch the desired operation method to green.

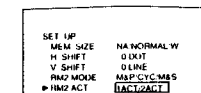
Type of control operation	Operation method
M & P (MEMORY & PRINT)	Storing an image into memory page and printing memory image. When you have selected the field mode: when the printer start printing, an image is queued and printed as soon as the current printing job has been completed.
CYC (CYCLIC MEMORY)	Storing images to memory page cyclically whenever you press the switch of the remote commander. The printer continues to store images, replacing previously stored images with the new one.
M & S (MEMORY & STOP)	Storing an image to memory page whenever you press the switch of the remote commander. The printer stops storing images to memory page once images have been stored to all memory pages. The Message STOP STOP STOP appears.

- 6 Select RM2 ACT by pressing the \wedge or \vee button.



Move the cursor to RM2 ACT by pressing the \wedge or \vee button.

- 7 Select the desired operating condition by pressing the $<$ or $>$ button.



Switch the desired operating condition to green.

Operating condition type	Operating condition
1ACT	Whenever you press the switch, the printer stores an image. You cannot check the image to be stored next.
2ACT	Whenever you press the switch, the printer stores an image. You can check the image to be stored next.

- 8 Press the MENU button. The regular screen appears.

Continue to next page \rightarrow

To make the message STOP STOP STOP disappear

When the message STOP STOP STOP is displayed on the video monitor, buttons except the STOP button become disable to operate.
Press the STOP button. The printer is reset to the normal printing mode.

Using the remote commander (not supplied) effectively

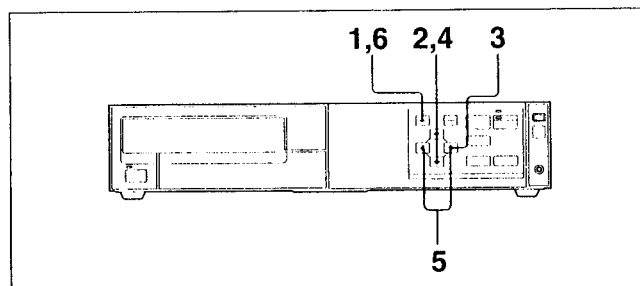
This function is effective when you store four reduced images or 16 reduced images. Whenever you press the foot switch, the image is stored into each position. For example, when M & P is selected with setting to store four reduced images, the printer stores fourth reduced image and starts to make a printout of four reduced images at fourth time foot switch pressing.

Note

If frame mode is selected, the printer does not store any image even thou you press the foot switch when the printer is printing.

Erasing the Screen Display

You can erase a screen display with the menu, when, for example, it is hard to see the image that is hidden behind the screen display (C, QTY, VIDEO, and others). The printer operation is identical, regardless of whether messages are displayed on the screen.



- 1 Press the MENU button.
The right screen appears.

Main Menu screen

MENU	PRINT QTY	1	COLOR 100
▶ INPUT SEL	VIDEO'S		
FRAME/FIELD	FRAME/FIELD		
SHARPNESS	LMH		
MULTI PIX	PUSH >		
COLOR ADJ	PUSH >		
CAPTION	PUSH >		
SET UP	PUSH >		

- 2 Select SET UP by pressing the ^ or v button.

MENU	PRINT QTY	1	COLOR 100
▶ INPUT SEL	VIDEO'S		
FRAME/FIELD	FRAME/FIELD		
SHARPNESS	LMH		
MULTI PIX	PUSH >		
COLOR ADJ	PUSH >		
CAPTION	PUSH >		
SET UP	PUSH >		

Move the cursor to SET UP by pressing the ^ or v button.

- 3 Press the > button.
The right screen appears.

SET UP sub menu

SET UP	MEM SIZE	NORMALW
▶ H SHIFT	0 DOT	
V SHIFT	0 LINE	
REMOTE2	MAP/CMMS	
DISPLAY	OFF ON	
MONITOR	E TO E THRU	

- 4 Select DISPLAY by pressing the ^ or v button.

SET UP	MEM SIZE	NORMALW
▶ H SHIFT	0 DOT	
V SHIFT	0 LINE	
REMOTE2	MAP/CMMS	
DISPLAY	OFF ON	
MONITOR	E TO E THRU	

Move the cursor to DISPLAY by pressing the ^ or v button.

- 5 Select OFF by pressing the < or > button.

SET UP	MEM SIZE	NORMALW
▶ H SHIFT	0 DOT	
V SHIFT	0 LINE	
REMOTE2	MAP/CMMS	
DISPLAY	OFF ON	
MONITOR	E TO E THRU	

Switch to green.

To display screen message
In step 5, select ON.

Note

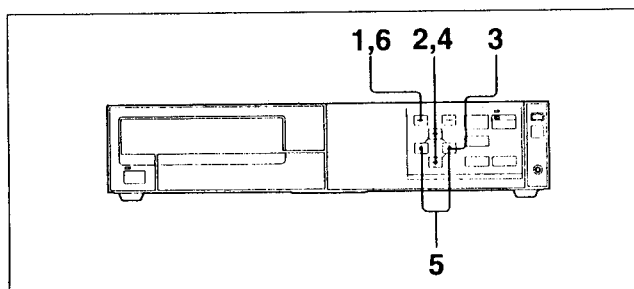
If you set the printer output signal specification to THRU (through), screen display do not appear, even when you switch ON to green.

- 6 Press the MENU button.
The regular screen appears.

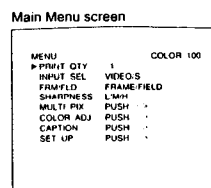
Viewing Images from Connected Video Equipment on the Video Monitor

You can view images of the signals from connected video equipment without processed in the video printer.
The printer outputs either of two kinds of video signals according to the MONITOR setting of the SET UP menu.
E TO E: Signals are output to the monitor after being processed by the printer's circuitry
THRU (through): Signals are output to the monitor as is

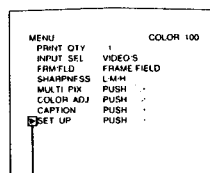
At the factory, the printer is set to E TO E. By changing to THRU, you can view the image with good quality without signal-processed in the printer.



- 1 Press the MENU button.
The following screen appears.

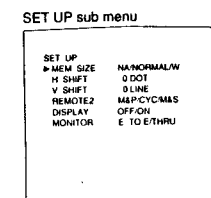


- 2 Select SET UP by pressing the Δ or ∇ button.

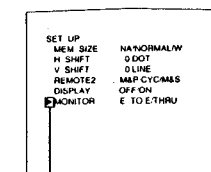


Move the cursor to SET UP by pressing the Δ or ∇ button.

- 3 Press the \triangleright button.
The right screen appears.

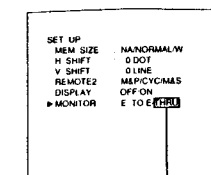


- 4 Select MONITOR by pressing the Δ or ∇ button.



Move the cursor to MONITOR by pressing the Δ or ∇ button.

- 5 Select THRU by pressing the \leftarrow or \rightarrow button.



Switch to green.

- 6 Press the MENU button.
The regular screen appears.
The image of the signal directly from the signal source (connected video equipment), which does not pass through the printer circuit, is displayed on the video monitor.

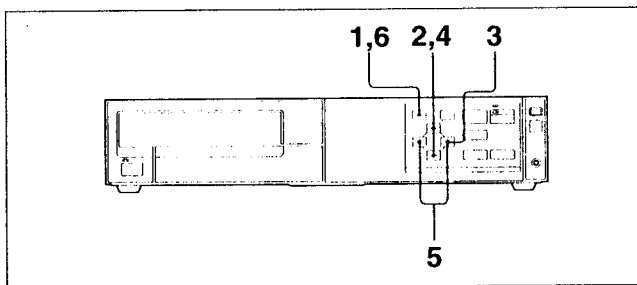
Note

When menu or screen display appears on the video monitor, the memory image is displayed on the monitor. Display the image from the video equipment on the video monitor by pressing the SOURCE/MEMORY button.

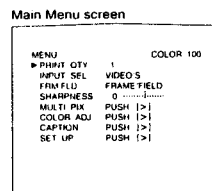
When the color of the video monitor is not correctly adjusted
Adjust the color of the video monitor by using the monitor controls.

Selecting Images on the Video Monitor After Storing the Video Image into Memory

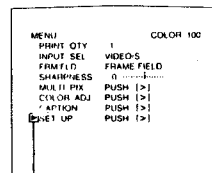
The printer displays either of two kinds of images after images are stored into memory according to the LIVE MODE setting of the SET UP sub menu.
LIVE MODE OFF: Images stored into memory (memory image)
LIVE MODE ON: Images stored into memory at the instant when the image is stored into memory, then video source image after about 1.8 seconds.
 At the factory, the printer is set to LIVE MODE OFF.



1 Press the MENU button.
The right screen appears.

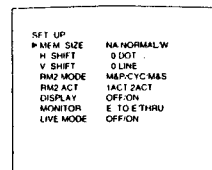


2 Select SET UP by pressing the Δ or ∇ button.

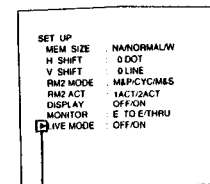


Move the cursor to SET UP by pressing the Δ or ∇ button.

3 Press the \triangleright button.
The right screen appears.

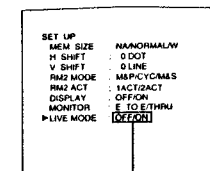


4 Select LIVE MDOE by pressing the Δ or ∇ button.



Move the cursor to LIVE MODE by pressing the Δ or ∇ button.

5 Select the desired image setting by pressing the \langle or \rangle button.



Switch the desired image setting to green.

LIVE MODE setting	When you select
OFF	To display the memory image (stored into memory) so as to confirm it. You can display the source image by pressing the SOURCE/MEMORY button.
ON	To display the source image. The memory image is displayed at the instant when the image is stored into memory, then after about 1.8 seconds, the source image appears. This setting is effective when storing images continuously without operating the SOURCE/MEMORY button to make multiple reduced printouts.

Note

Pay attentions to the followings when you set LIVE MODE to ON.

You can not perform the following operations while the memory image is being displayed. If so, alarm tone sounds.

- Remote commander operation.
 - Deleting images stored into memory.
 - PRINT, MEMORY IN, SOURCE/MEMORY and MEMORY PAGE button operation.
- However, STOP button and menu control keys are operable.
- When 2ACT of RM2 ACT is selected when selecting the operation mode for automatic printing capabilities, the memory image remains on the screen even if you LIVE MODE is set to ON.

6 Press the MENU button.

1-13. ERROR MESSAGES

If a problem occurs, the ALARM lamp lights in orange and an error message and warning message stating the problem appears on the monitor. This section lists messages in alphabetical order, together with their possible causes and remedies. Note the message and act accordingly.

Error/warning message	Possible causes and remedies
CHECK RIBBON SETTING	The front panel (on the right from the user's standpoint) opens accidentally during printing. — Close the front panel. (see page 9)
FEED ERROR	The paper jams as it is being fed into the ribbon area around the paper tray. — Remove the jammed paper from the printer. (see page 67)
HEAD IN COOLING	The thermal head has overheated. — Leave the printer idle and until the head cools and this error message disappears.
NO CARTRIDGE	The ink ribbon cassette is not correctly installed. (see page 8) — Insert the ink ribbon cassette correctly.
NO PAPER	The paper has been exhausted. — Load paper. (see page 10)
PREHEATING	The thermal head is preheating. — Leave the printer until the head has preheated and this message disappears.
REMOVE PRINTS	The paper has jammed near the paper cover. — Remove the jammed paper from the printer. (see page 67)
REMOVE STUCK PAPER	The paper has jammed during printing. — Remove the jammed paper from the printer. (see page 67)
RIBBON & PAPER MISMATCH	The ink ribbon cassette and paper are not compatible. — Use a compatible cassette/paper combination. (see page 64)
RIBBON DOOR OPEN	The front panel (on the right from the user's standpoint) is open. — Close the front panel. (see page 9)
RIBBON END	The ink ribbon cassette has been exhausted. — Insert a new ribbon. (The ink ribbon cassette cannot be reused.) (see page 8)
RIBBON ERROR	An ink ribbon cassette that cannot be used with this printer has been loaded. — Insert the appropriate ink ribbon cassette. (see page 64)

If the message is not cleared, even after completing the necessary remedy

If, after completing the remedy given in "Error Message", the message is not cleared from the video monitor, turn the printer's power off, then back on again. This should allow the printer to again be operated normally.

If ERRORxx appears

If the message "ERROR xx" (xx = error number) appears, perform the following.

- 1 Turn off the power of the printer.
- 2 Remove the ink ribbon cassette, paper cover and paper tray, and check for any paper jams inside the printer.
(see "Loading an Ink Ribbon Cassette" page 8 and "Loading Paper" page 10)

If you find any jammed paper, remove it carefully.

If the ink ribbon cassette cannot be removed, or the jammed paper cannot be removed, contact your Sony service facility.

- 3 Insert the ink ribbon cassette, paper cover and paper tray to the printer.
- 4 Turn on the power of the printer.

When the message does not appear, you can use the printer as normal. However, the image stored to memory will have been cleared. Store the image to memory again.

If the same message appears again, the printer must not be operated. Turn off the power immediately and contact your Sony service facility.

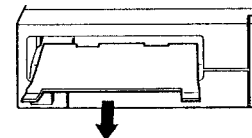
If the Paper Jams

If the paper jams as it is being fed into the ribbon area during printing, or when being fed into the paper cover area, printing stops and a message appears on the monitor, according to where the jam has occurred.

Message	Position where the paper has jammed
FEED ERROR	Before printing and being fed into the ribbon area
REMOVE STUCK PAPER	During printing, inside the printer
REMOVE PRINTS	Instantaneously before completing printing, near the paper cover

When FEED ERROR appears

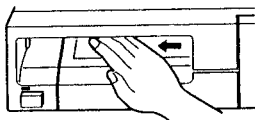
- 1 Remove the paper cover.
When any printouts have been ejected on the paper cover, remove those printouts first before removing the paper cover.



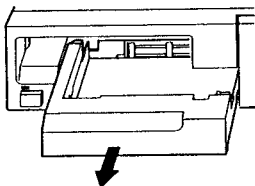
Continue to next page →

Others 67

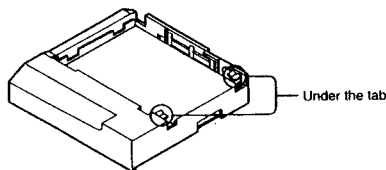
- 2** Check whether any paper is stuck inside the printer. If you find a jammed sheet, slowly pull it into the paper tray.



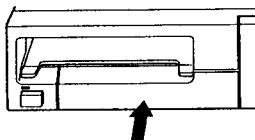
- 3** Remove the paper tray.



- 4** Load the paper into the paper tray correctly.
Discard the paper removed in step 2.



- 5** Slide the paper tray and paper cover back into the printer.



When REMOVE STUCK PAPER appears

Perform the same operation as that performed when FEED ERROR appears. When you cannot remove the jammed paper, remove the ink ribbon cassette too. If you find a jammed sheet inside the printer, remove it carefully.

When REMOVE PRINTS appears

Carefully remove the jammed paper from near the paper cover.

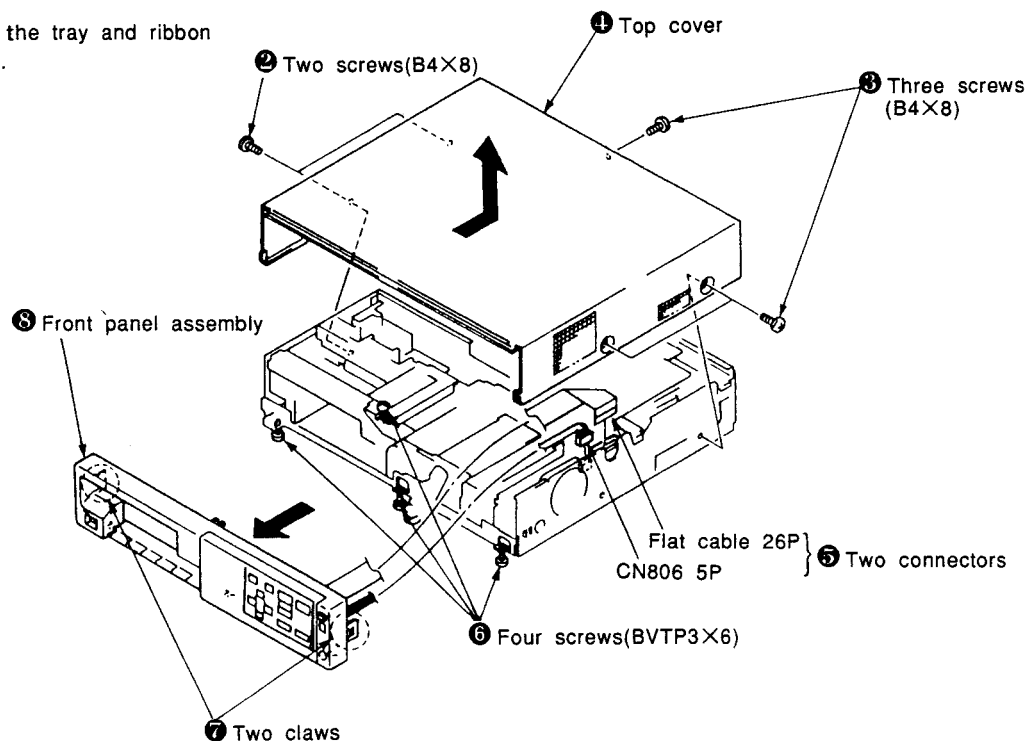
1-14. TROUBLESHOOTING

Symptom	Possible causes and remedies
Nothing appears on the monitor.	<ul style="list-style-type: none"> The POWER switch of the printer is not set to ON. → Set the POWER switch of the printer to ON. The POWER switch of the monitor is not set to ON. → Set the POWER switch of the monitor to ON. Connections may not be correct. → Make connections correctly. (see page 39)
Any message does not appear on the regular screen.	<p>If an incorrect sync signal is input, nothing may appear on the monitor.</p> <p>→ In this case, check the monitor first by pressing the SOURCE/MEMORY button to display the image stored in memory. If an image appears, the monitor is working correctly. Change the INPUT SELECT settings on the menu screen. (see page 12)</p> <p>Or, set the connected video equipment to playback mode, if it is in another mode such as stop mode.</p>
Any message and image do not appear on the regular screen.	<p>If an image stored in memory appears when the SOURCE/MEMORY button is pressed, the MONITOR settings on the SET UP sub menu is set to THRU.</p> <p>Change the MONITOR settings to E TO E. (see page 59)</p>
The printer does not print.	An error message appears on the display. (see page 66)
A black line appears on the printout.	<p>A portion corresponding to there being no signal is printed in black.</p> <p>→ Shift the printout area. (see page 52) Store a new image and print it.</p>
The printer makes a printout with black frame.	<p>A portion corresponding to there being no signal is printed in black.</p> <p>→ Change the printout size to make it narrow. (see page 50) Store a new image and print it.</p>
The printed image is partially cut out.	<p>Only a part of video signal has been stored.</p> <p>→ Change the printout size to make it wide. (see page 50) Store a new image and print it.</p>
A caption is not printed clearly.	<p>Printed in field mode.</p> <p>→ Store the image in frame mode and print it in frame mode.</p>
The printout is blurred.	<p>The quickly moving image has been stored in frame mode.</p> <p>→ Change the mode to field mode, then print it again.</p>

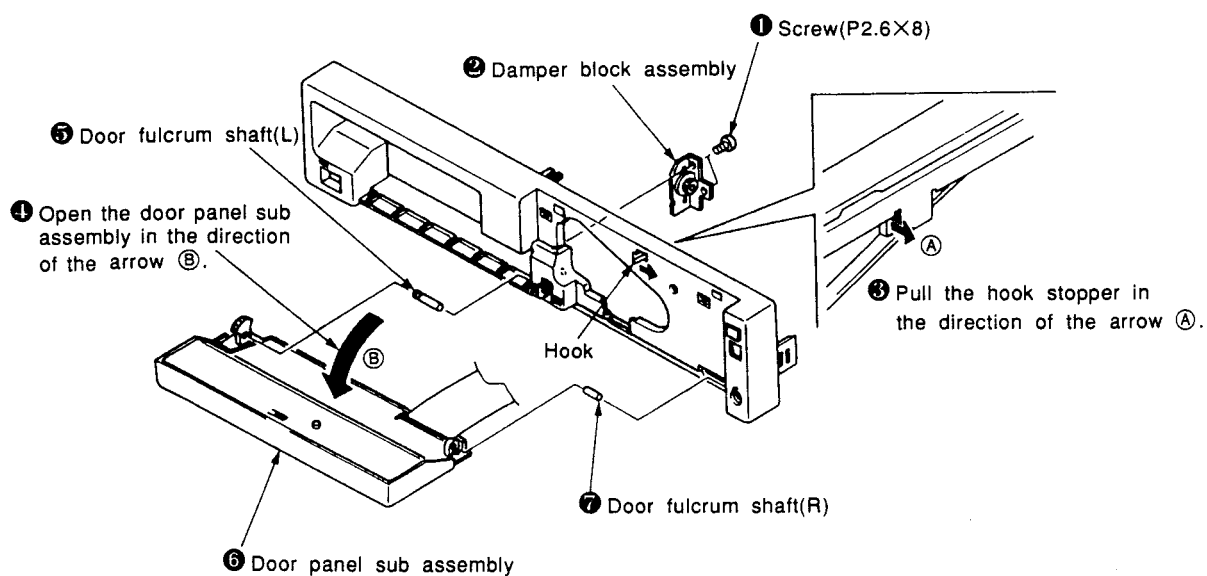
SECTION 2 DISASSEMBLY

2-1. REMOVAL OF CABINET ASSEMBLY

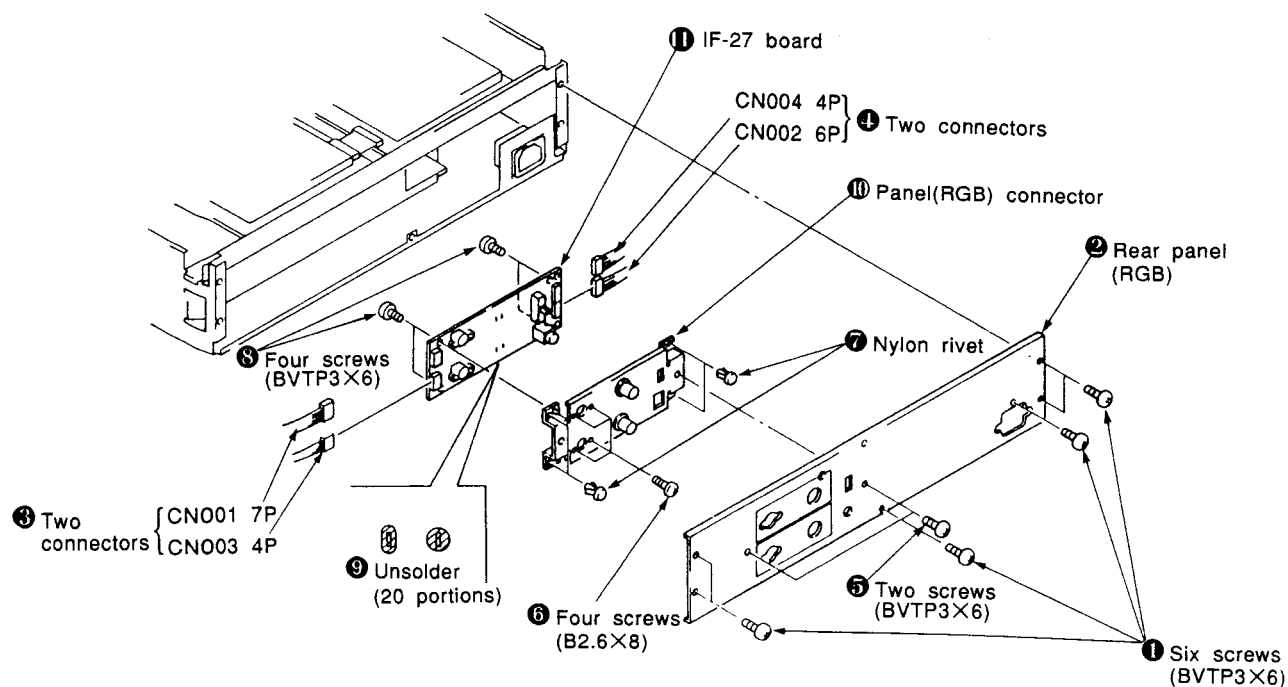
- ① Remove the tray and ribbon cartridge.



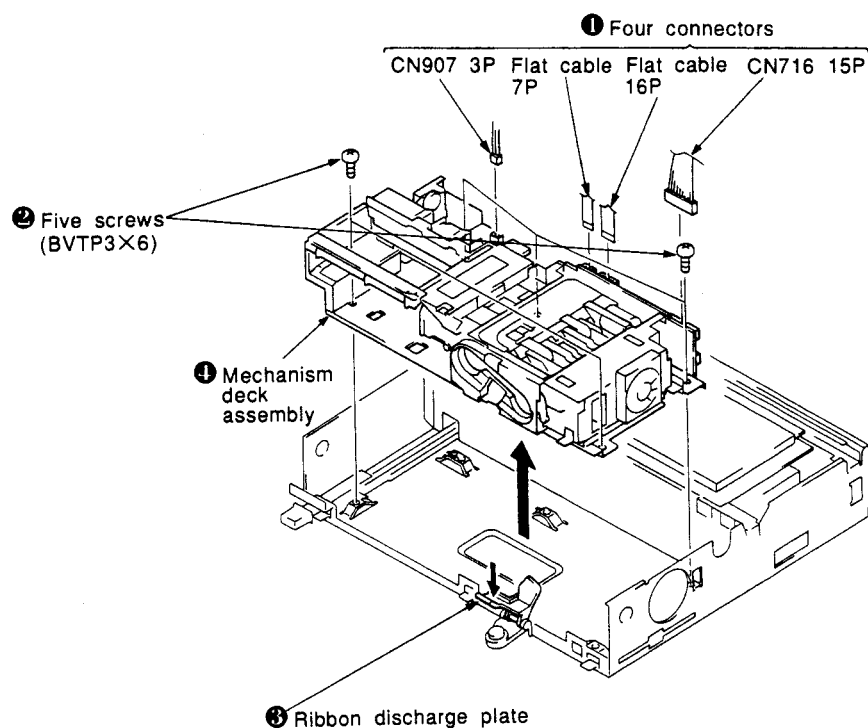
2-2. REMOVAL OF DOOR PANEL SUB ASSEMBLY



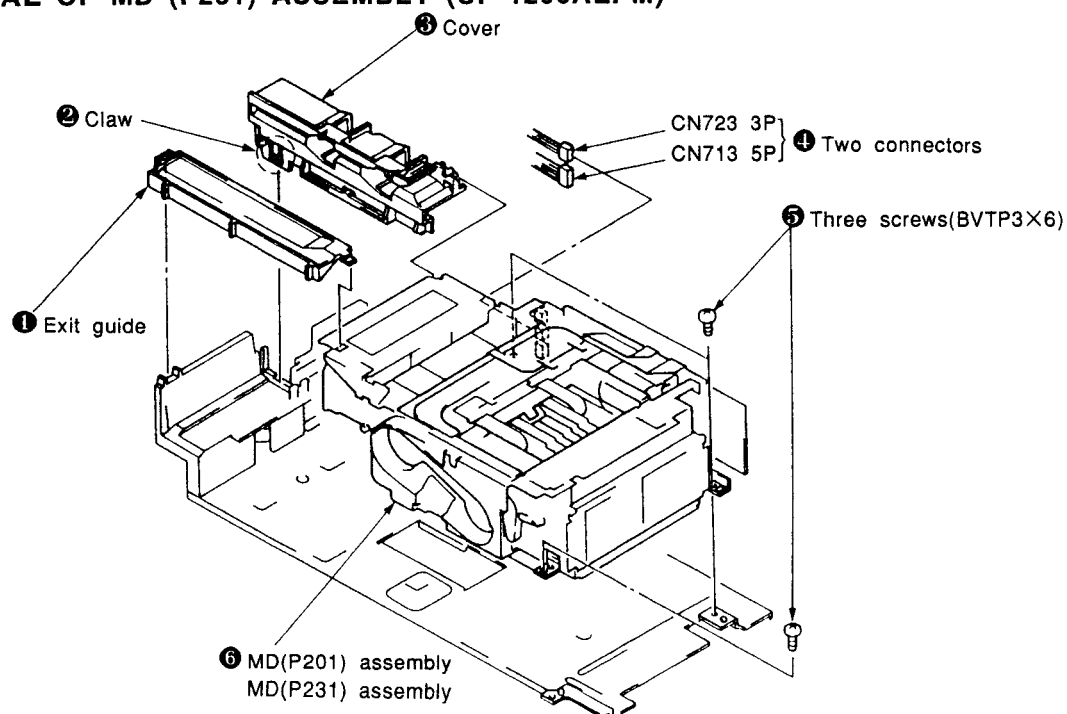
2-3. REMOVAL OF IF-27 BOARD



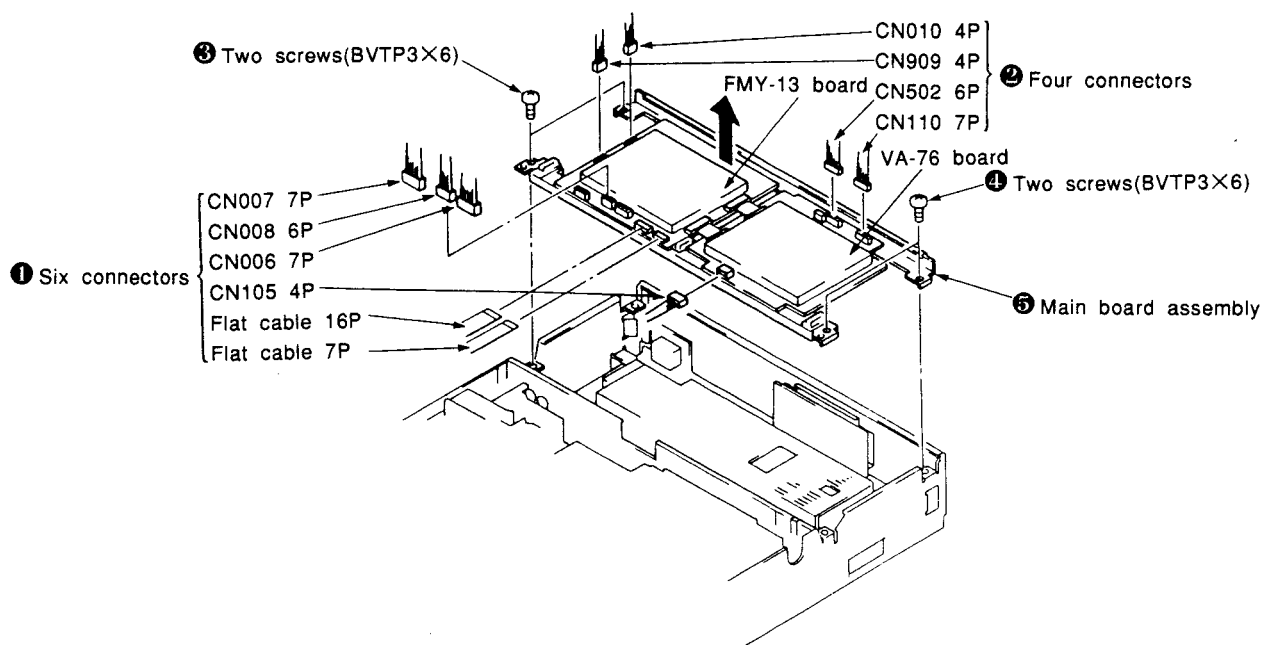
2-4. REMOVAL OF MECHANISM DECK ASSEMBLY



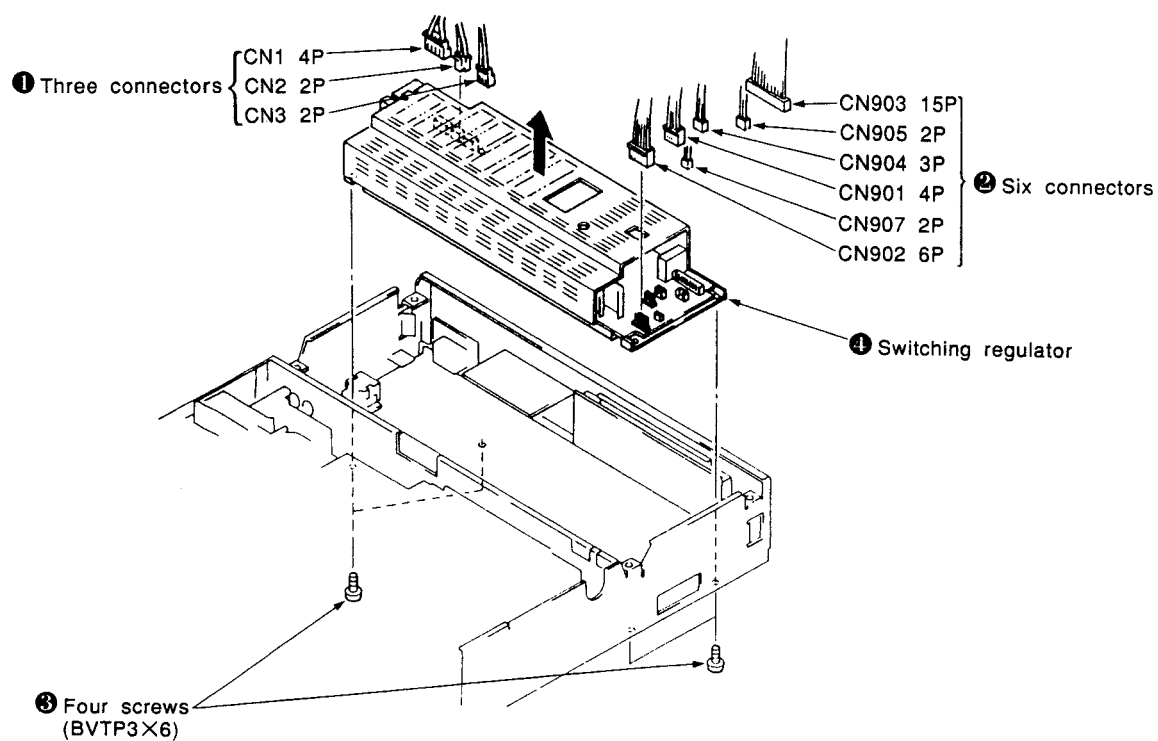
2-5. REMOVAL OF MD (P201) ASSEMBLY (UP-1200A) REMOVAL OF MD (P231) ASSEMBLY (UP-1200AEPM)



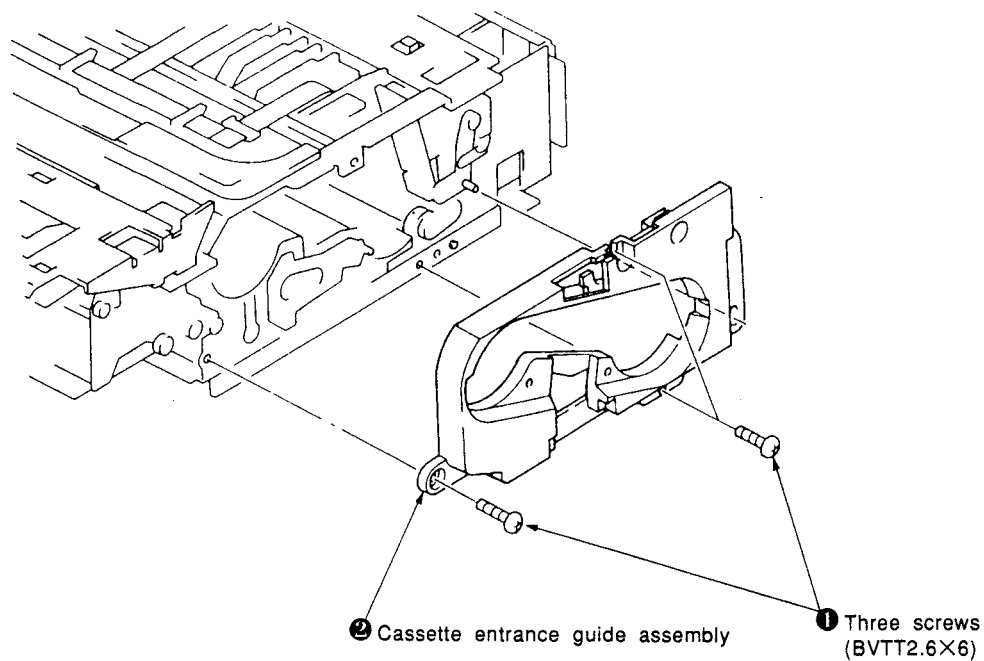
2-6. REMOVAL OF MAIN BOARD (FMY-13 BOARD, VA-76 BOARD) ASSEMBLY



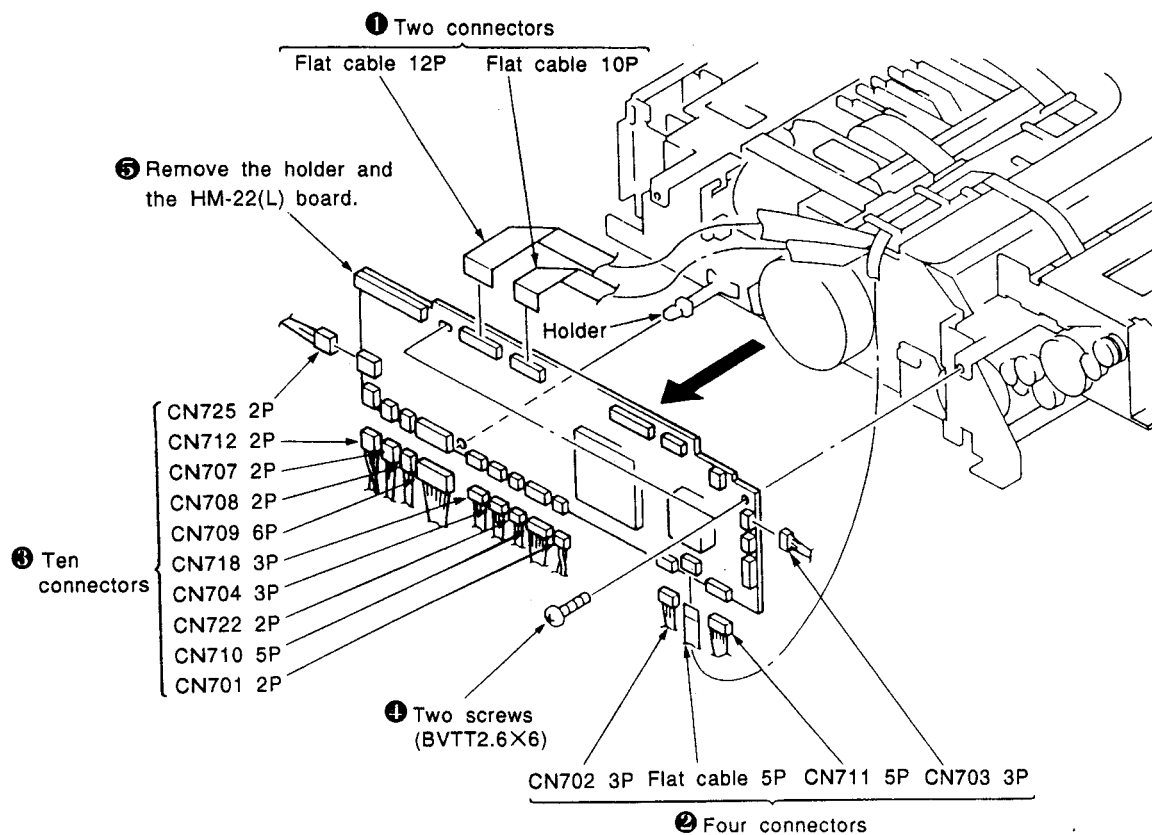
2-7. REMOVAL OF SWITCHING REGULATOR



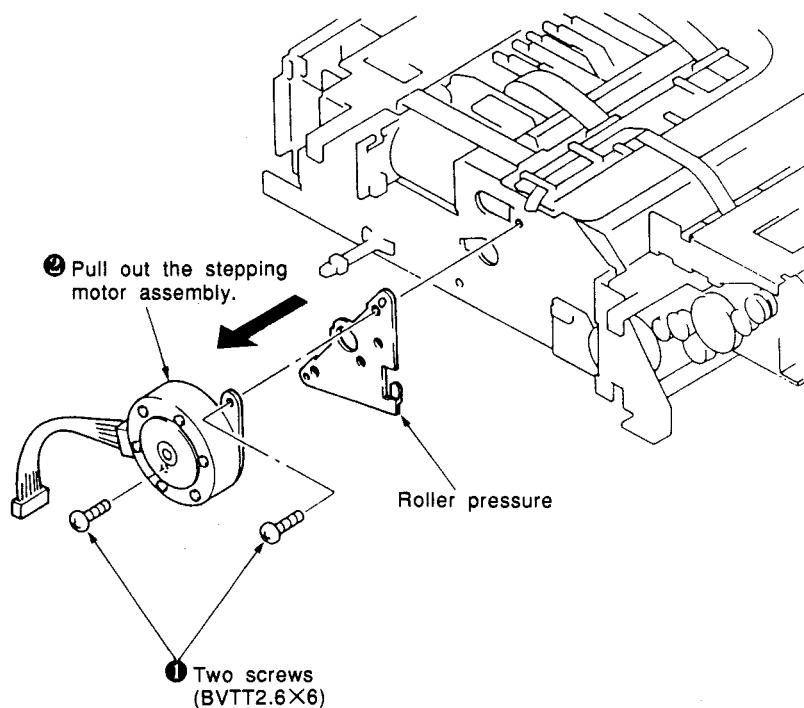
2-8. REMOVAL OF CASSETTE ENTRANCE GUIDE ASSEMBLY



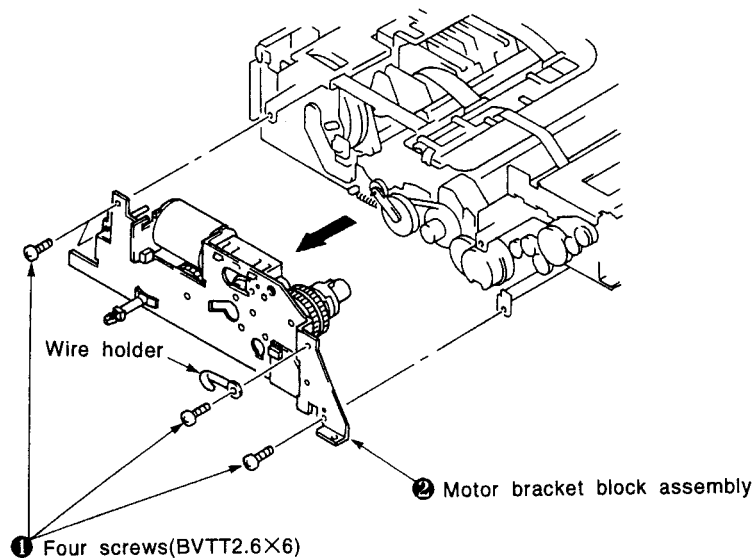
2-9. REMOVAL OF HM-22(L) BOARD



2-10. REMOVAL OF STEPPING MOTOR ASSEMBLY

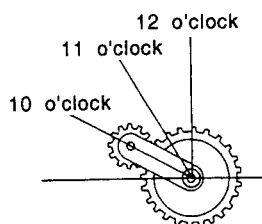


2-11. REMOVAL OF MOTOR BRACKET BLOCK ASSEMBLY

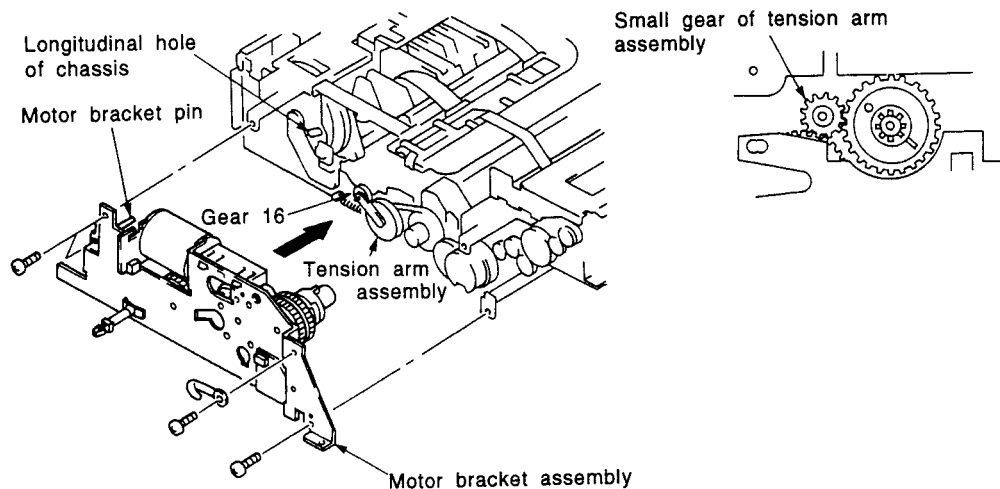


*Cautions during MD Assembling

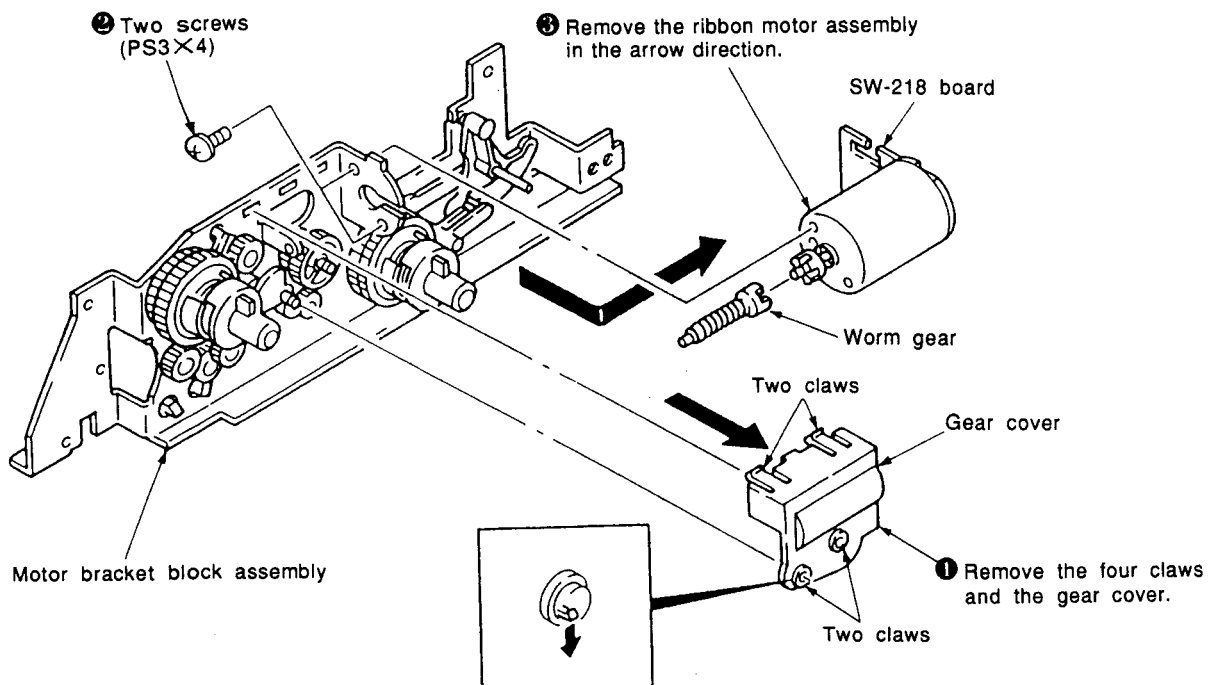
- Assembling of motor bracket assembly
- Confirm that the head is set to the H0 position.
(Refer to Fig. 1 in section 2-17.)
- Move the gear 16 arm of the tension arm assembly in the direction of 10 to 11 o'clock.



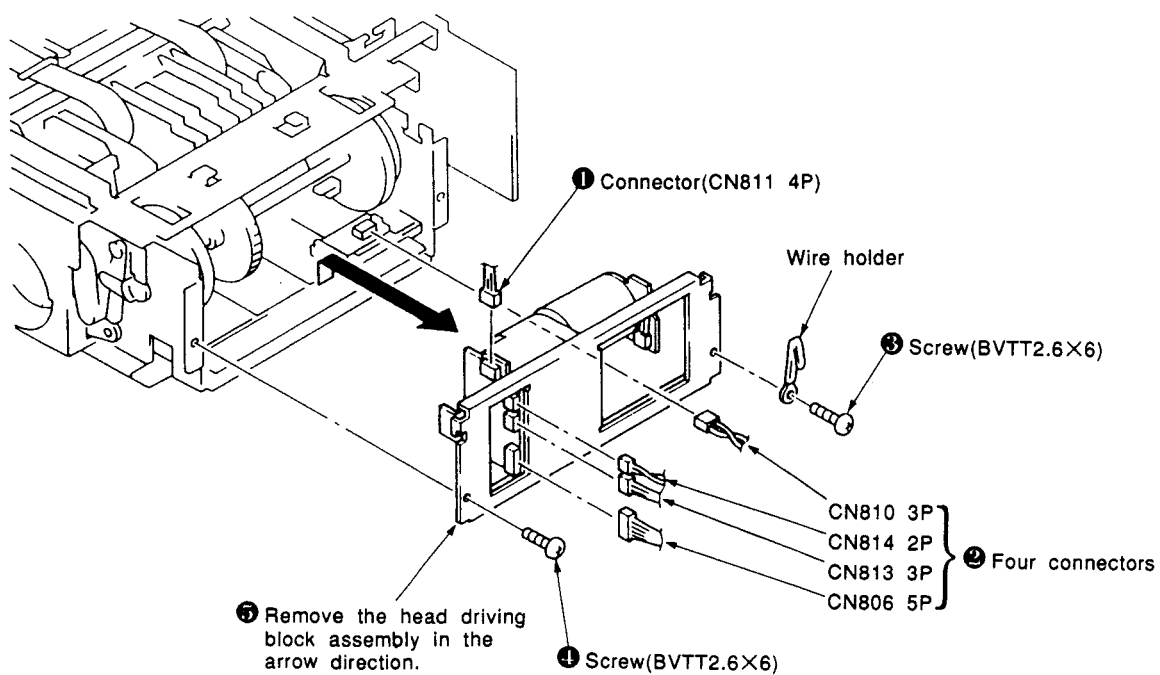
- Install the motor bracket assembly in the chassis.
- Confirm that the pin of the motor bracket is put on the left side of the chassis's longitudinal hole. (Refer to Fig. 3 in section 2-17.)
- View the inside of the chassis from the direction of the ribbon entrance and confirm that gear 16 is properly positioned beside the supply reel assembly. (Take care that the reel wire of the microswitch on the SW-214 board is not caught.)



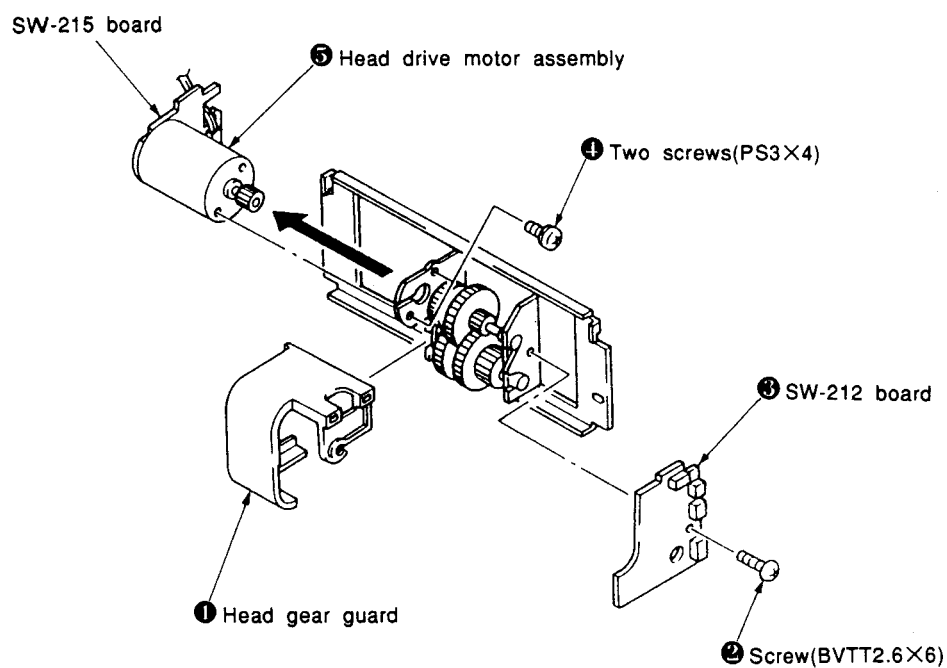
2-12. REMOVAL OF RIBBON MOTOR ASSEMBLY



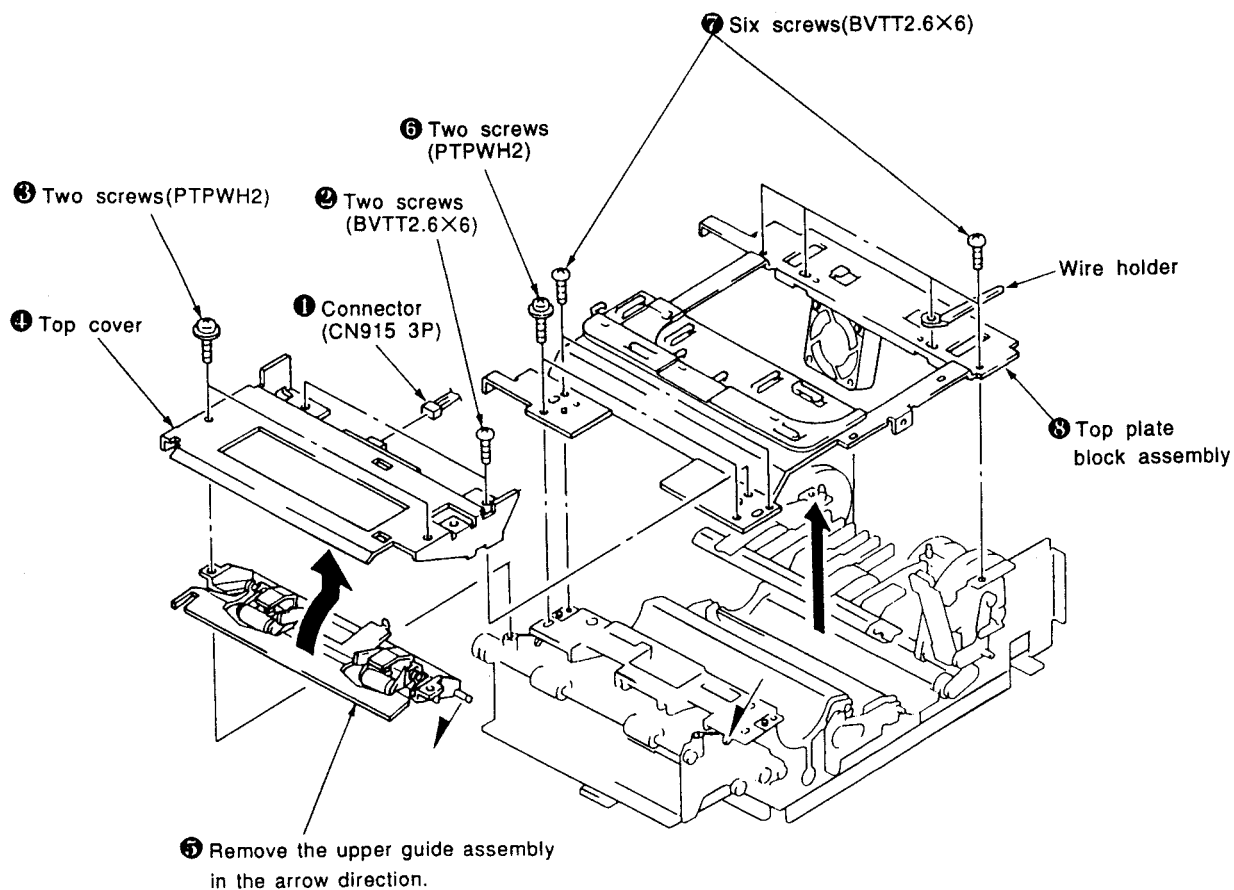
2-13. REMOVAL OF HEAD DRIVING BLOCK ASSEMBLY



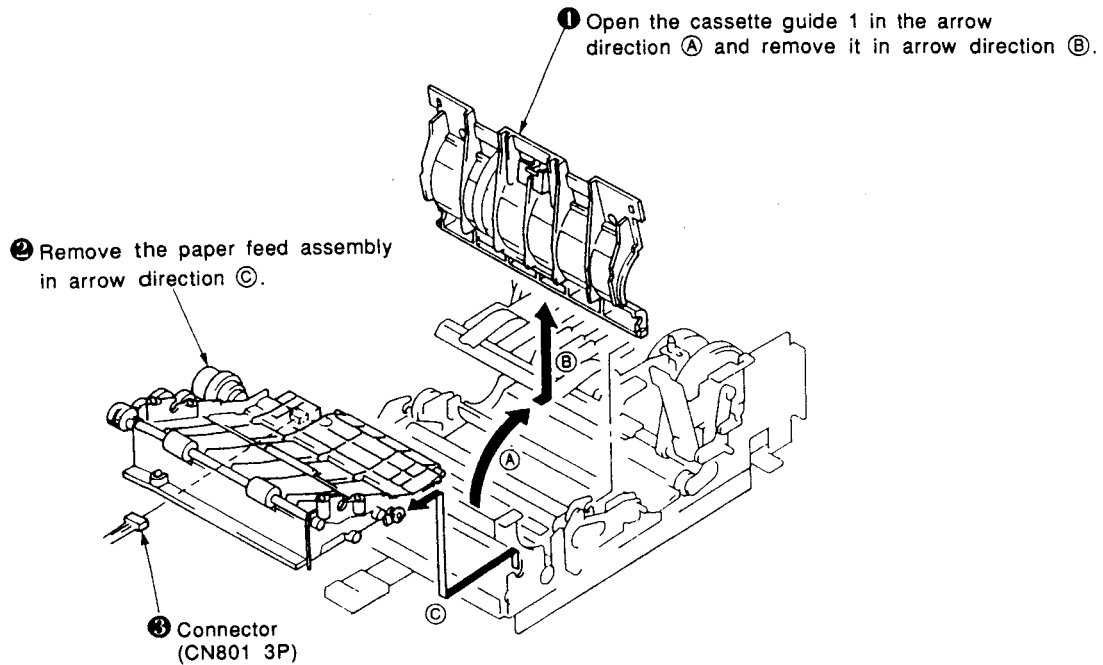
2-14. REMOVAL OF HEAD DRIVE MOTOR ASSEMBLY



2-15. REMOVAL OF UPPER GUIDE ASSEMBLY AND TOP PLATE BLOCK ASSEMBLY

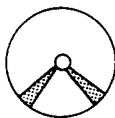


2-16. REMOVAL OF CASSETTE GUIDE 1 AND PAPER FEED ASSEMBLY



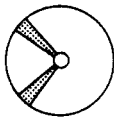
*Cautions during MD Assembling

- Move the roller to the P2 position. (Refer to the illustrated gear.)
Rotate the reflection plate of the gear manually so that it is put in the position shown below.



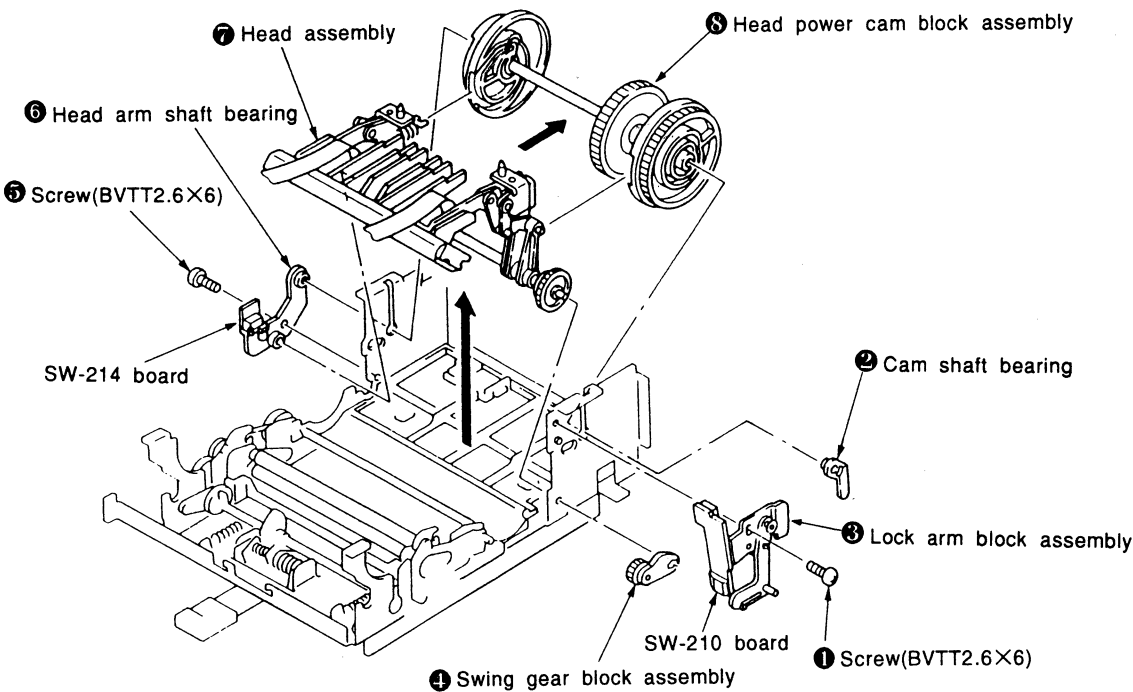
(Set the gear position to P2.)

- Install the paper feed assembly in the chassis. (Refer to section 2-16.)
- Handle the lead wire of the sensor with care and fix it to the hook of the paper feed tray guide.
- Move the roller to the P0 position. (Refer to the illustrated gear.)
Rotate the reflection plate of the gear manually so that it is put in the position shown below.



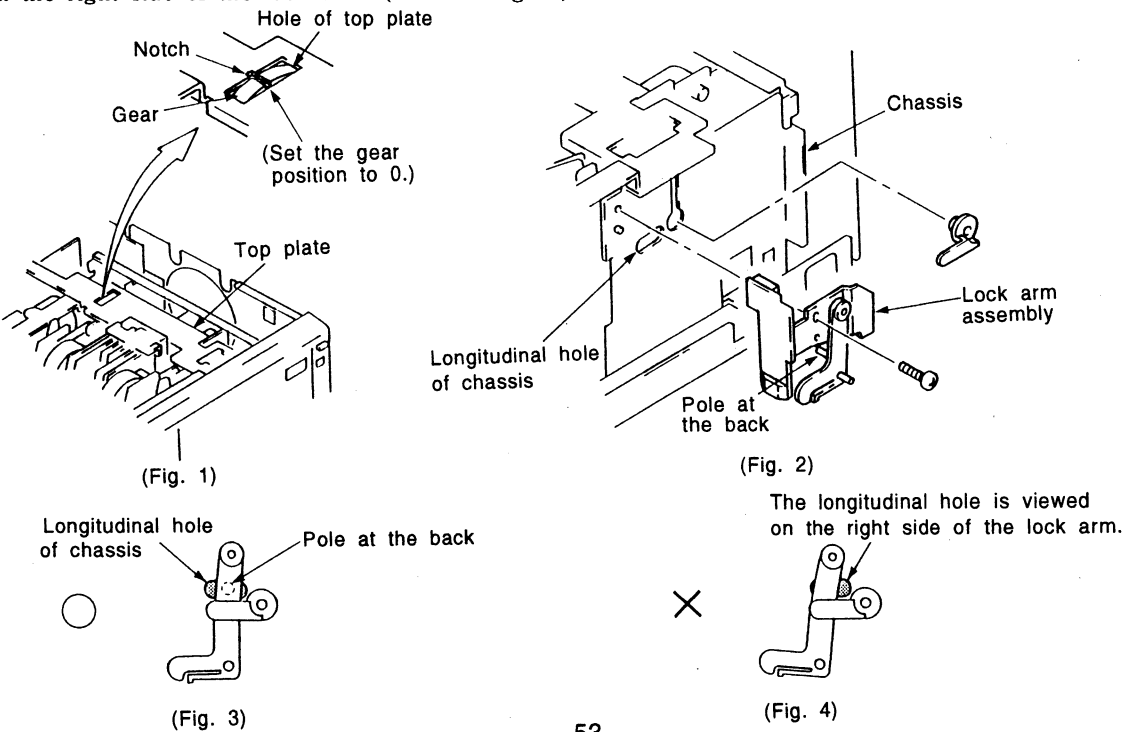
(Set the gear position to P0.)

2-17. REMOVAL OF HEAD ASSEMBLY AND HEAD POWER CAM BLOCK ASSEMBLY

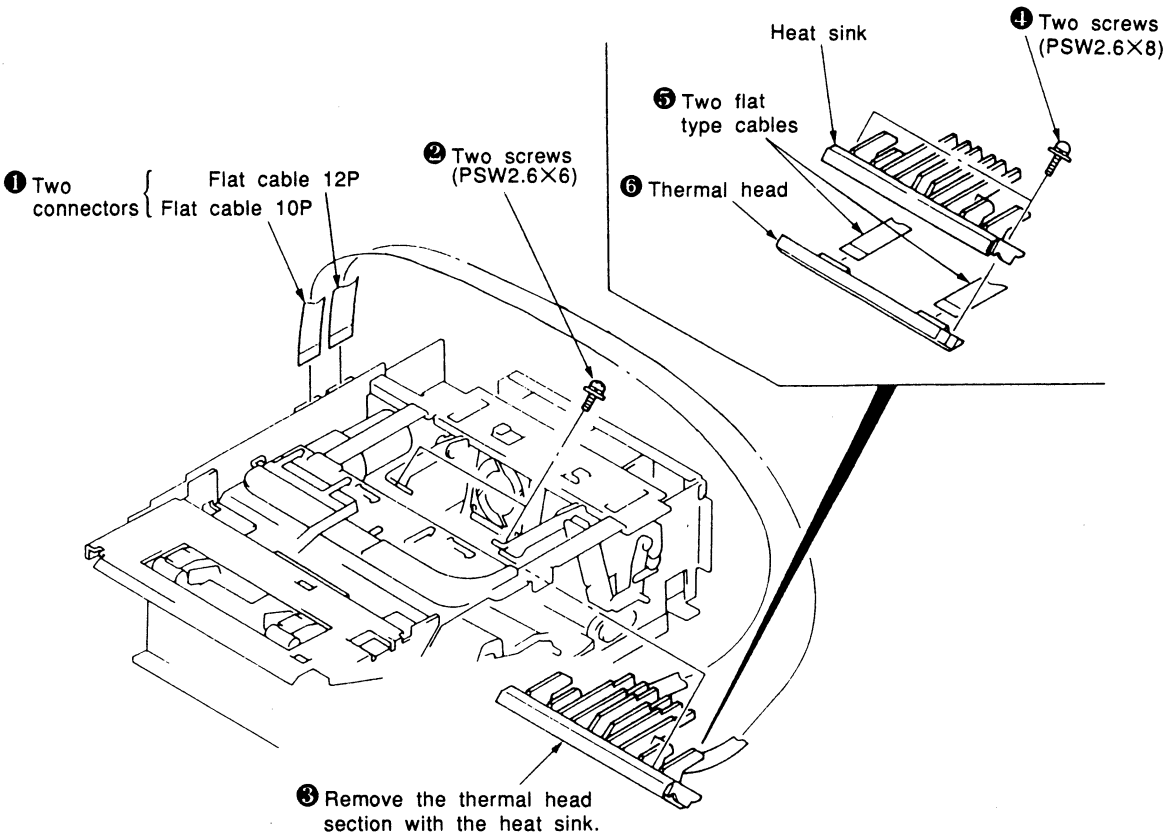


*Cautions during MD Assembling

- Confirm that the head is set to the H0 position. (Refer to Fig. 1.)
 - If the head is not in the H0 position, remove the head drive assembly once, rotate the gear in the direction of the H0 position, and install the head drive assembly again.
 - Insert the pole at the back of the lock arm into the groove of the head cam, then install.
- If the lock arm is installed properly, the longitudinal hole of the chassis is viewed on the left side of the lock arm. (Refer to Fig. 3.)
- If it is installed improperly, the longitudinal hole of the chassis is viewed on the right side of the lock arm. (Refer to Fig. 4.)

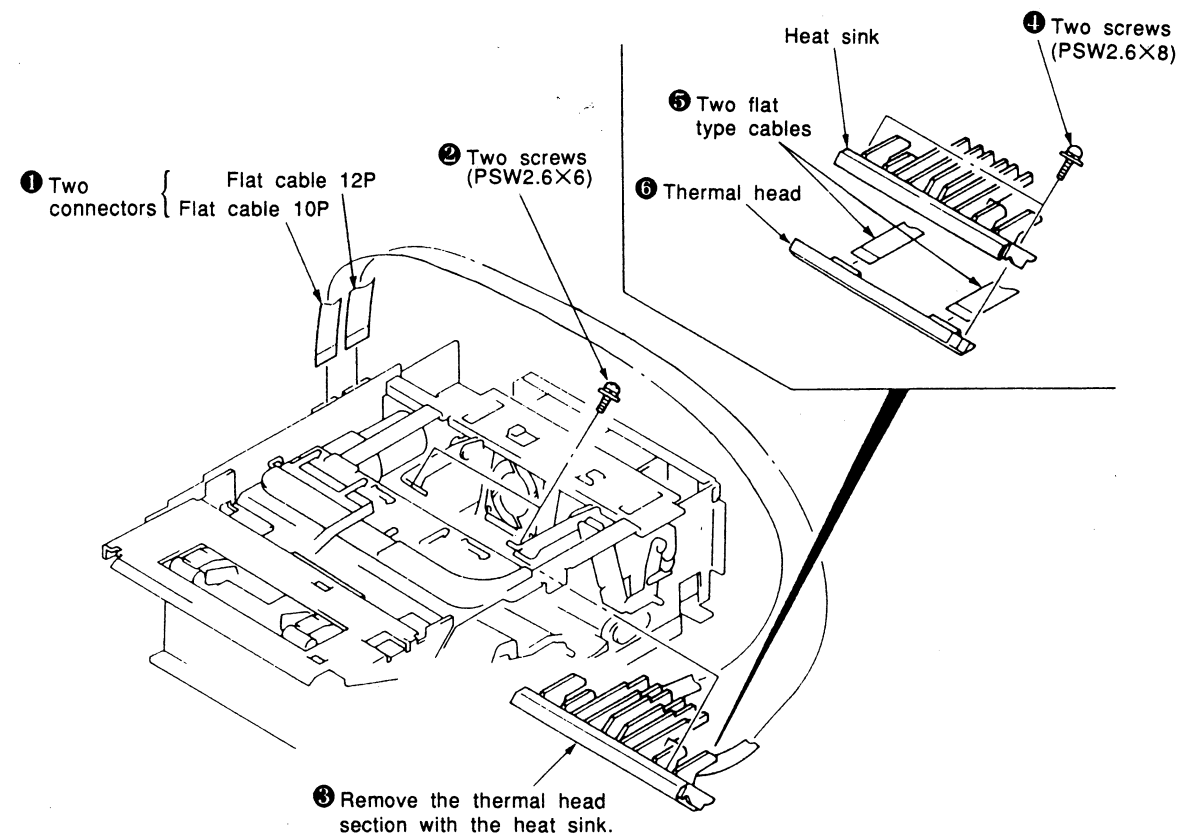


2-18. REMOVAL OF THERMAL HEAD

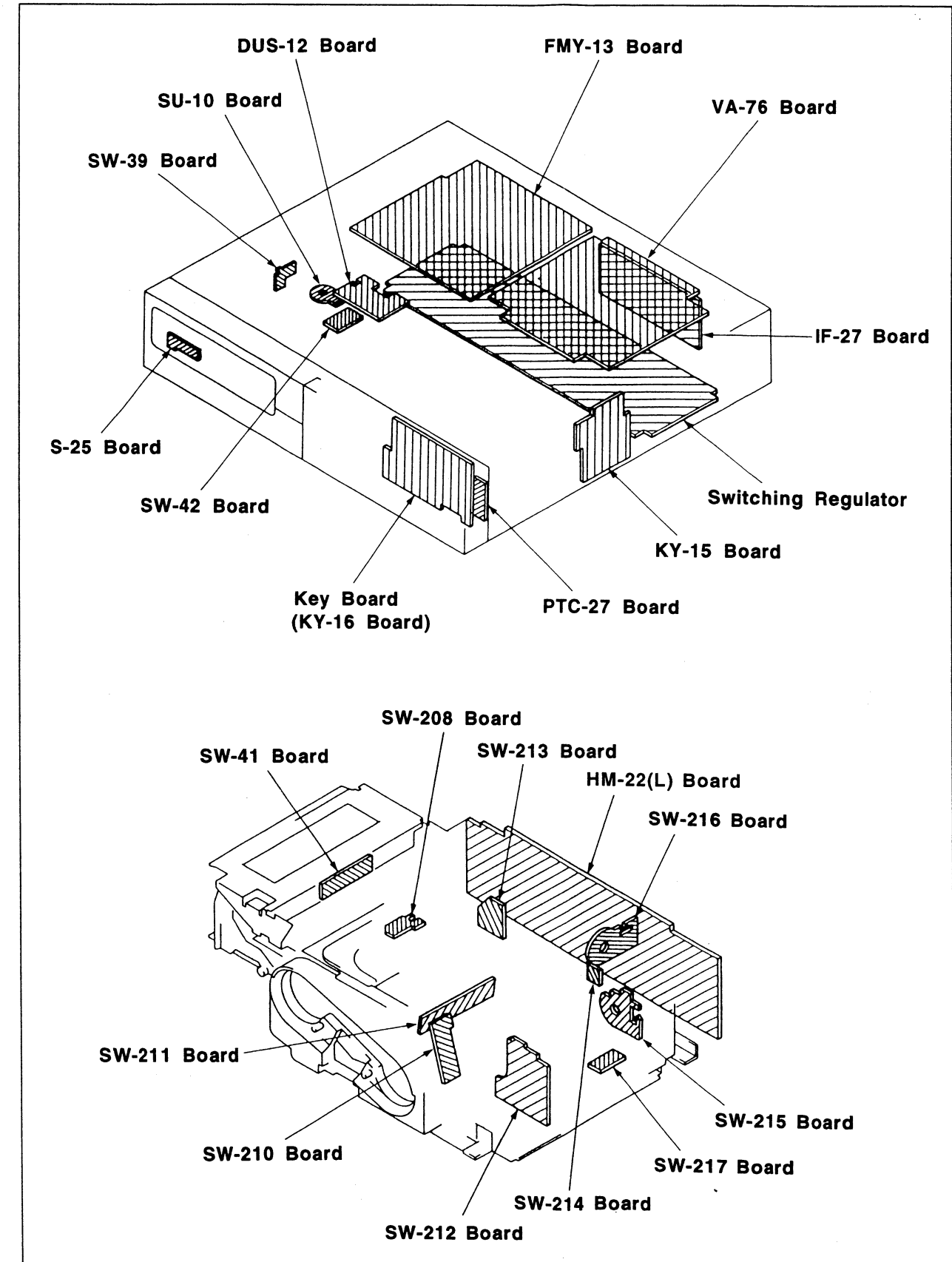


SECTION 3 DIAGRAMS

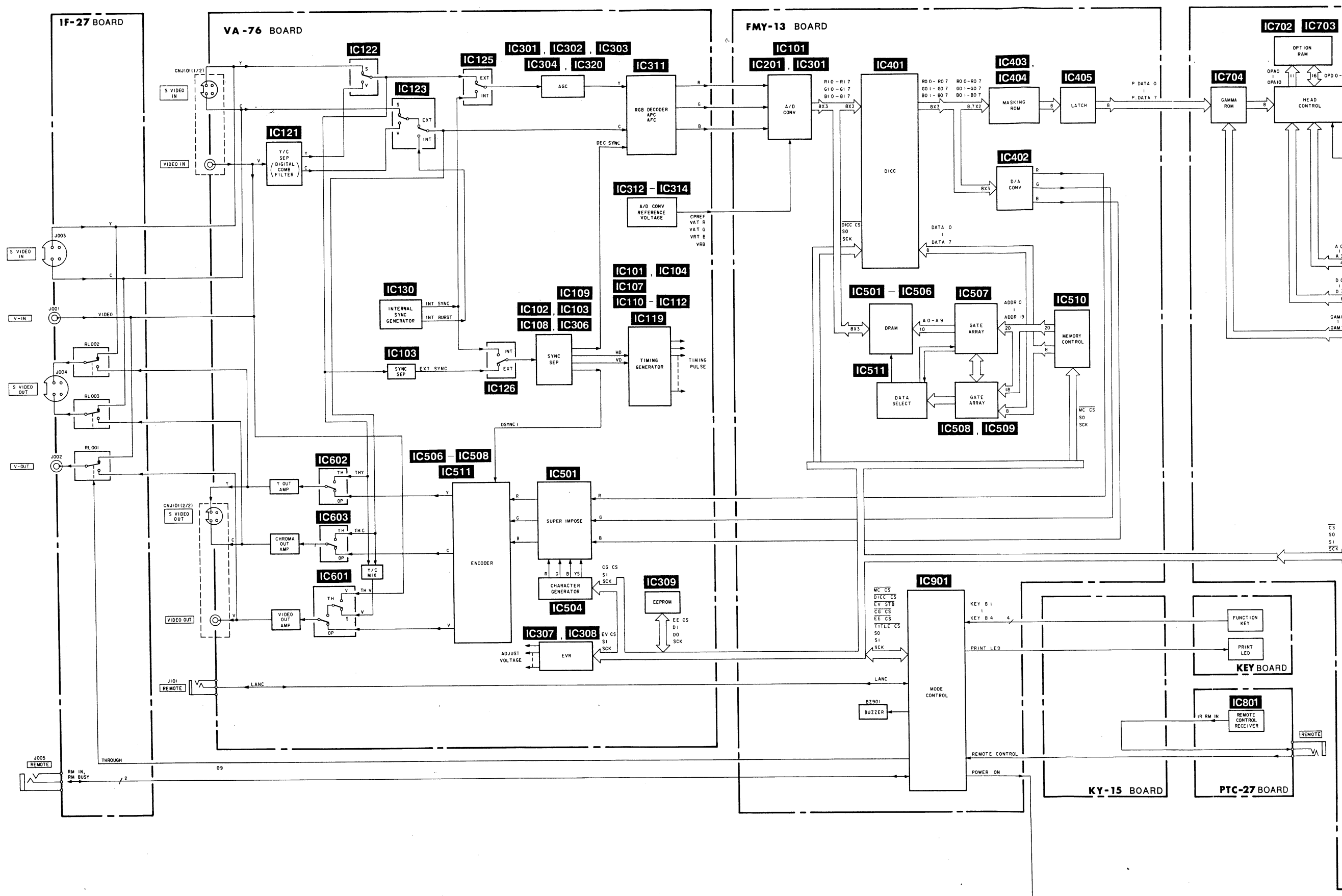
2-18. REMOVAL OF THERMAL HEAD



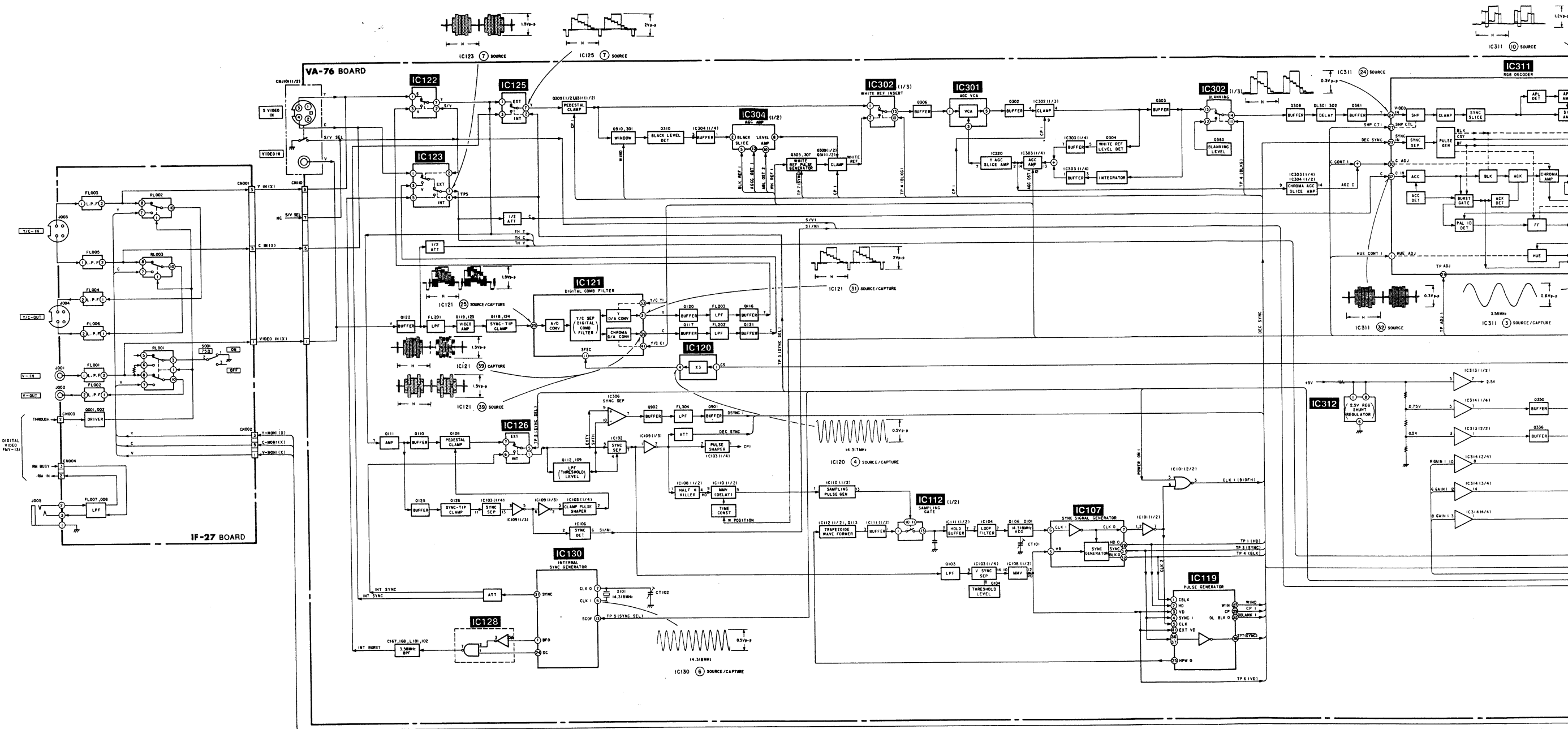
3-1. CIRCUIT BOARDS LOCATION

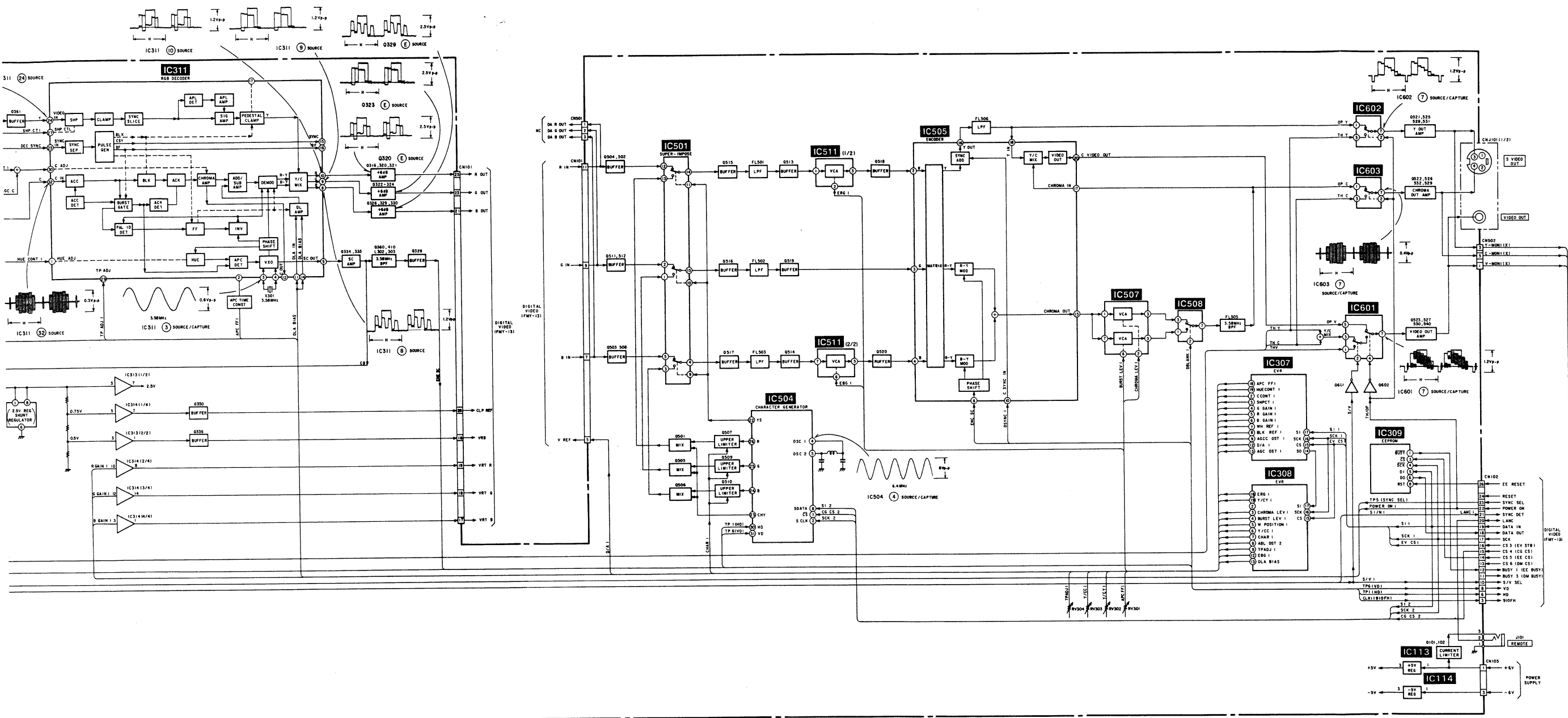


3-2. OVERALL BLOCK DIAGRAM

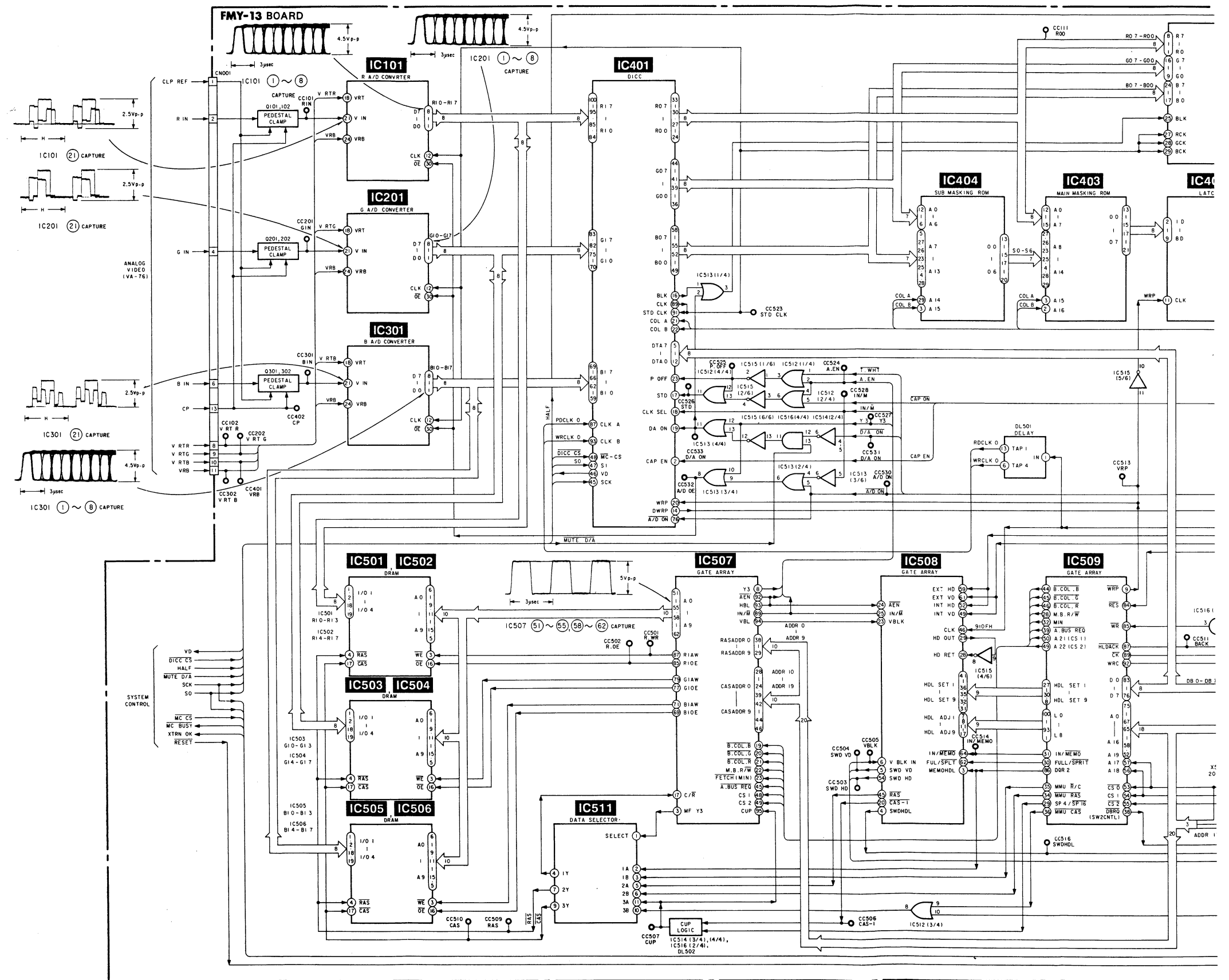


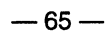
3-3. ANALOG BLOCK DIAGRAM



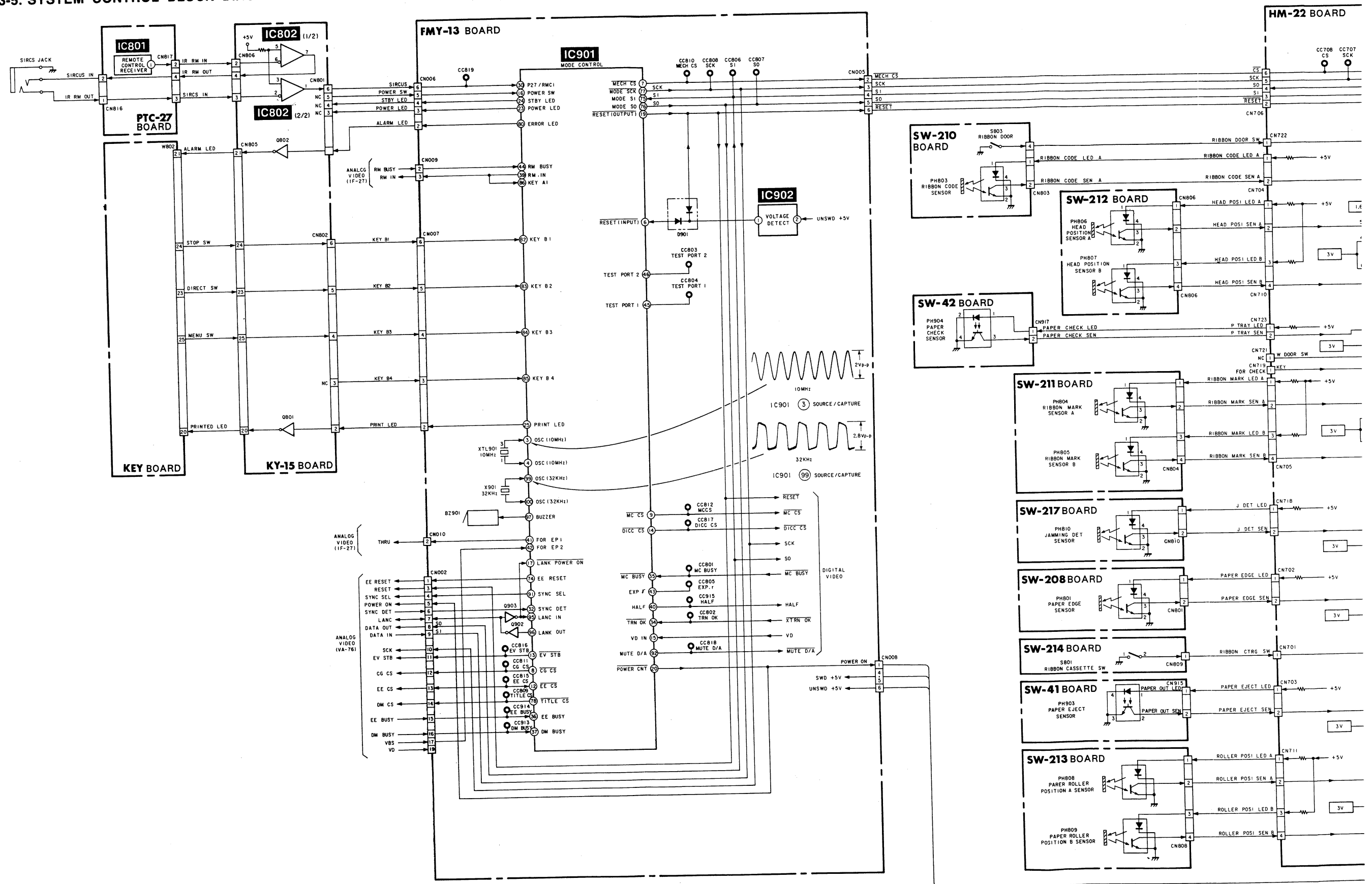


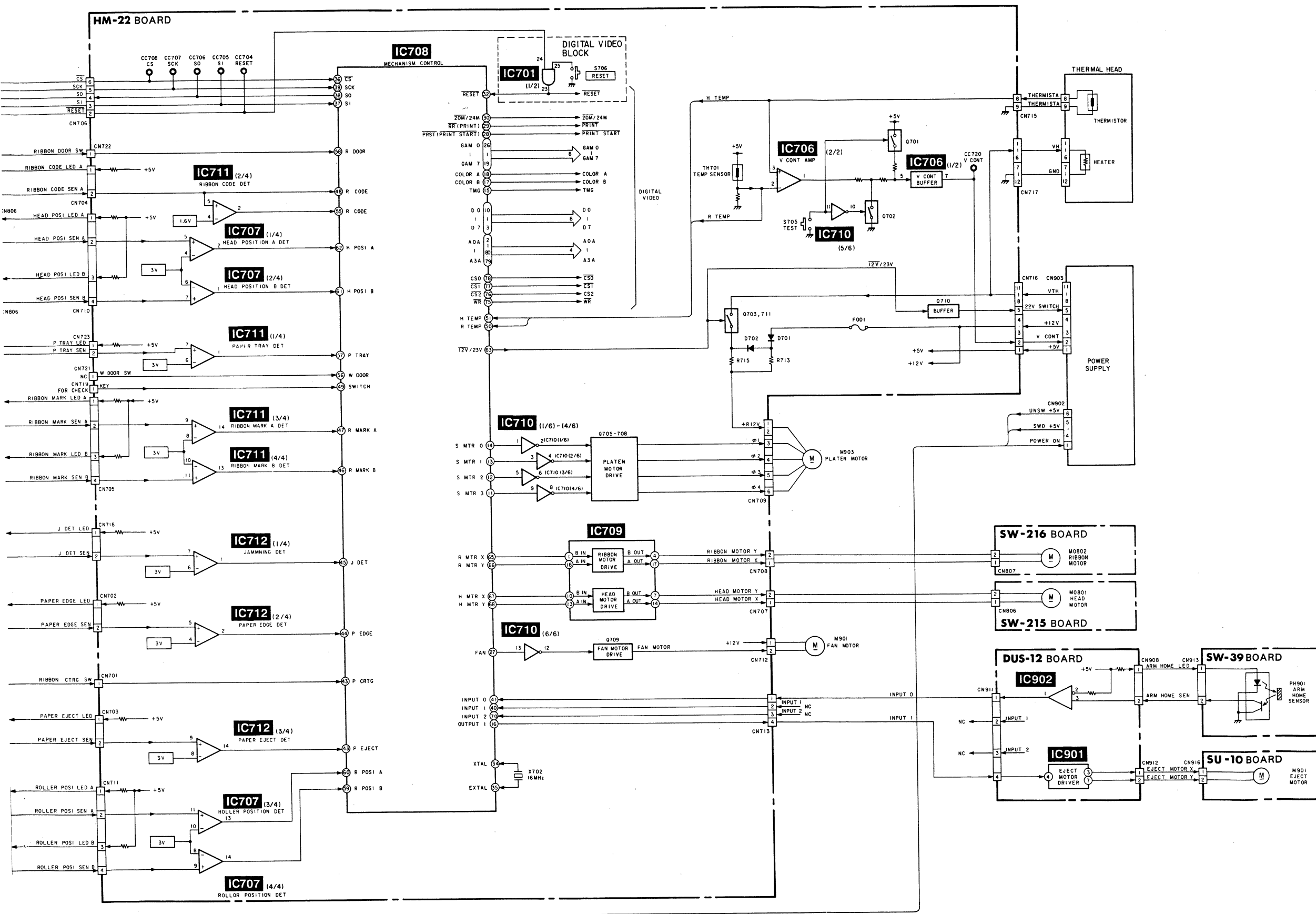
3-4. DIGITAL BLOCK DIAGRAM



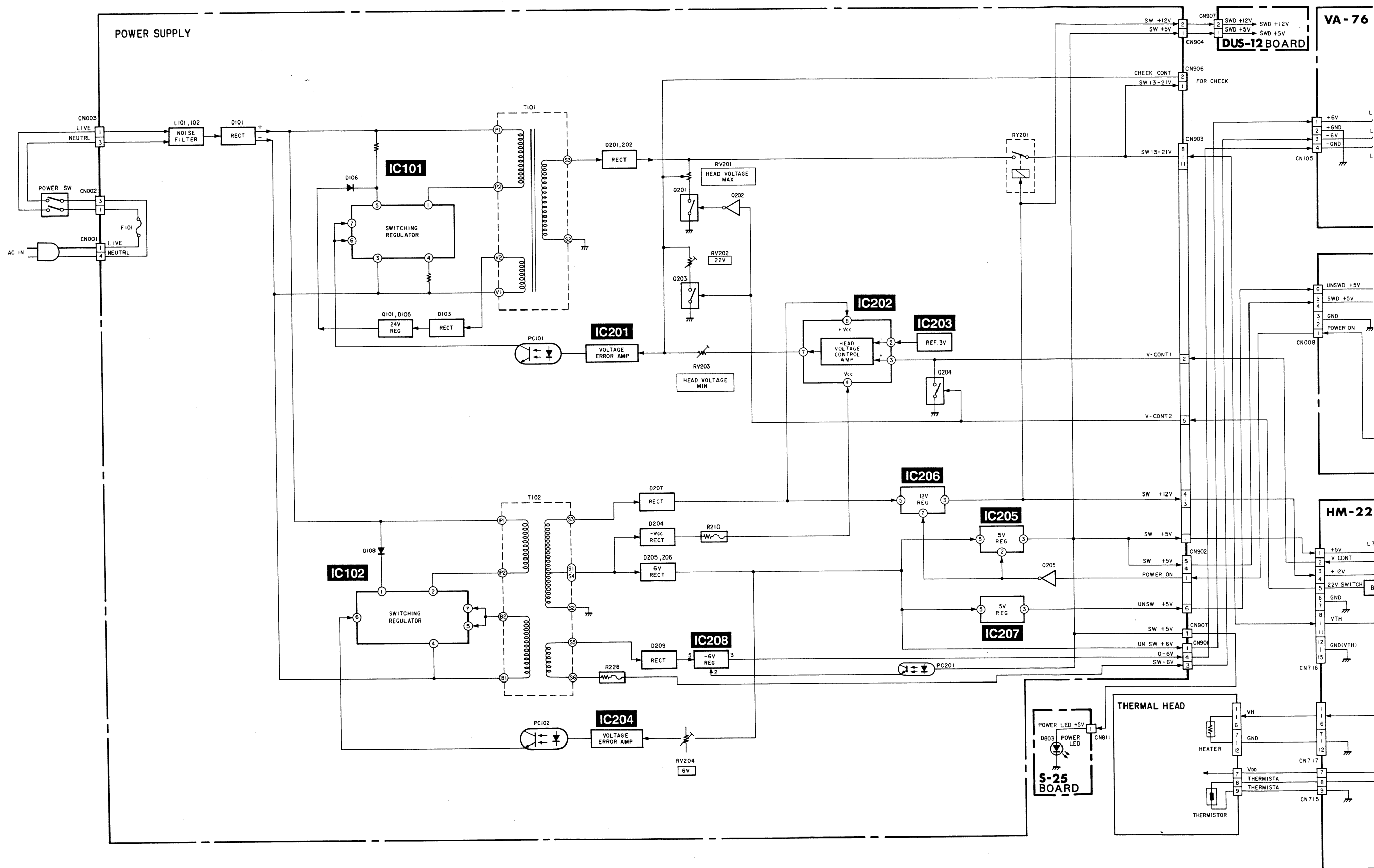


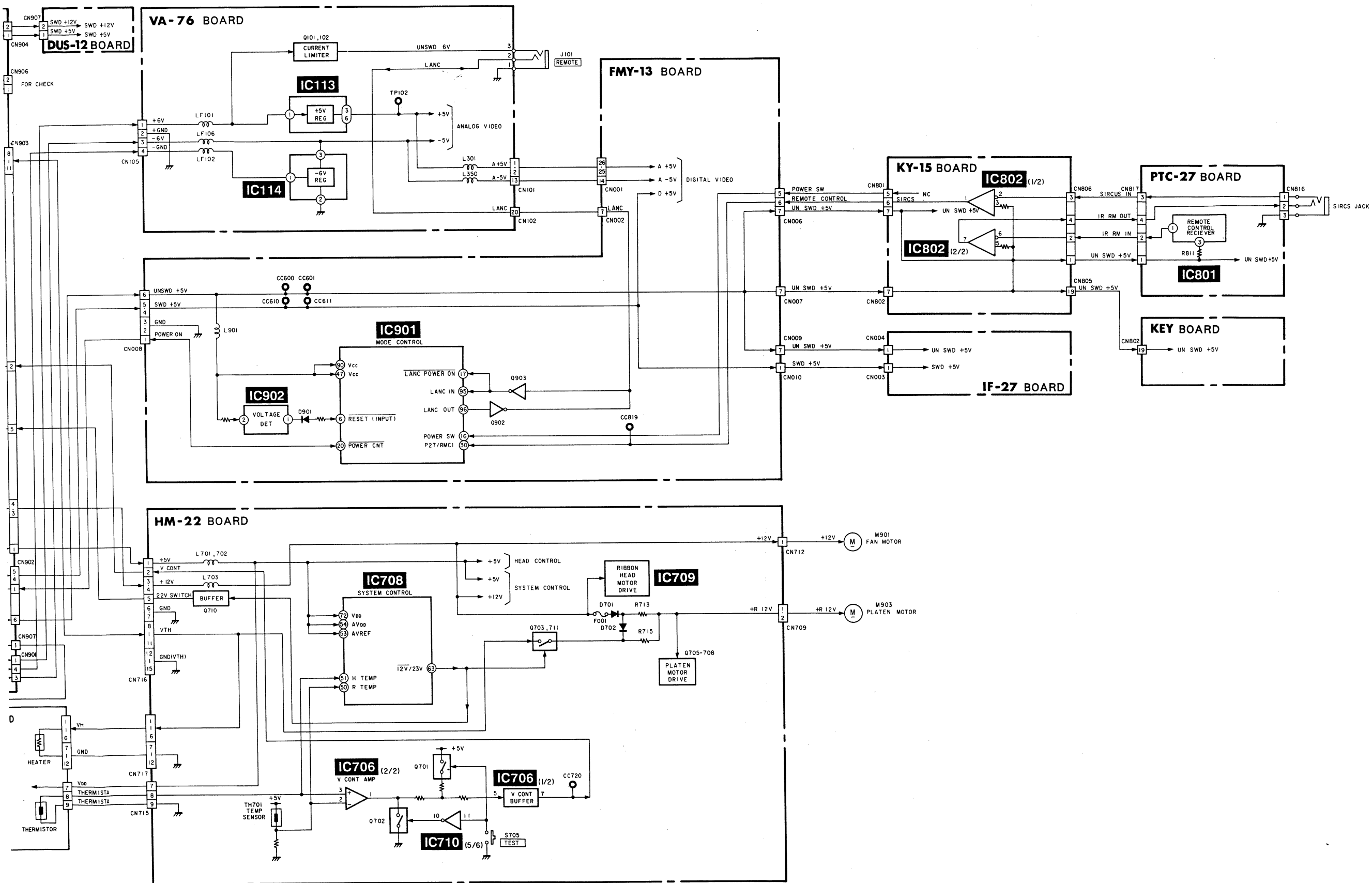
3-5. SYSTEM CONTROL BLOCK DIAGRAM



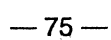


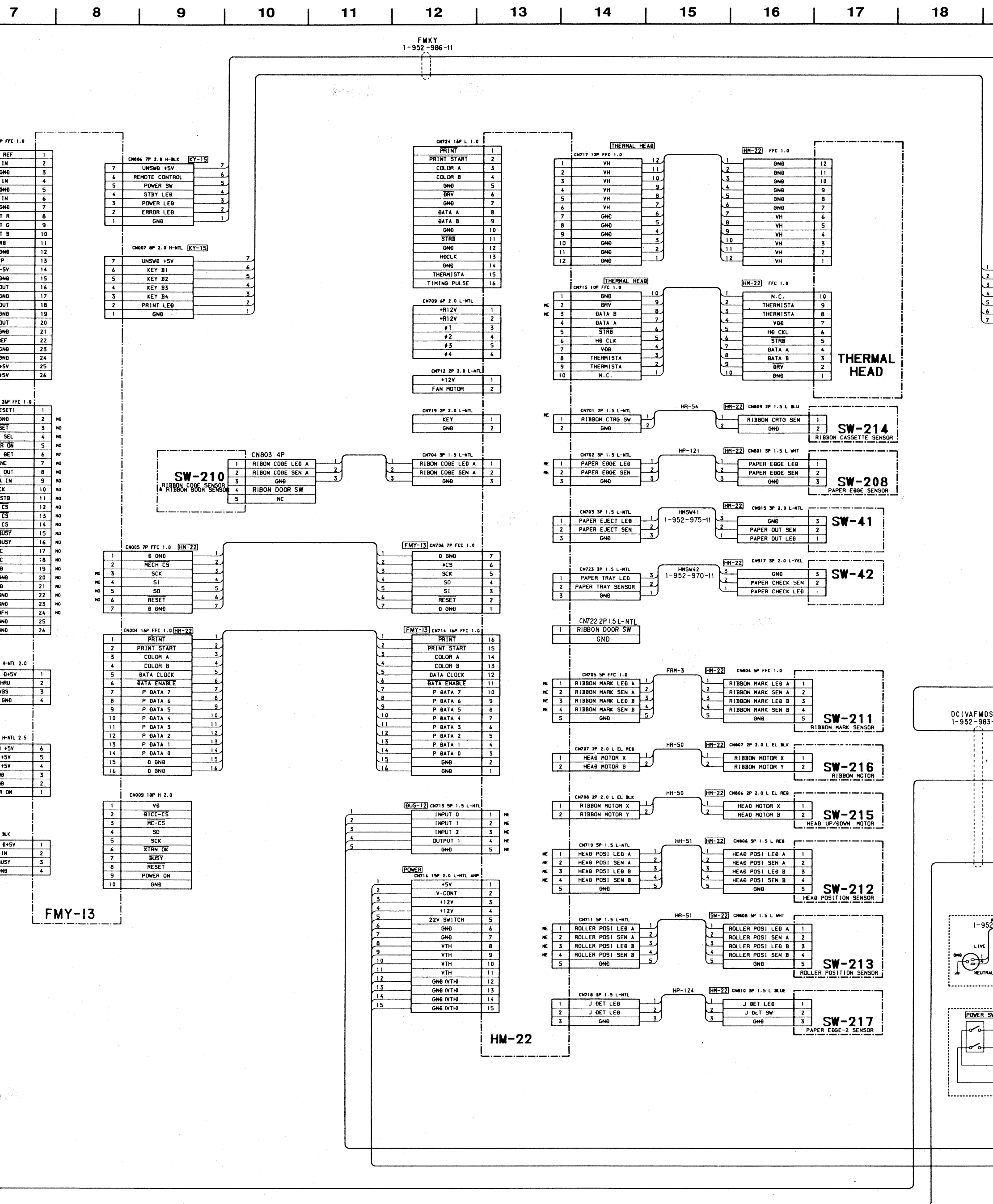
3-6. POWER SUPPLY BLOCK DIAGRAM

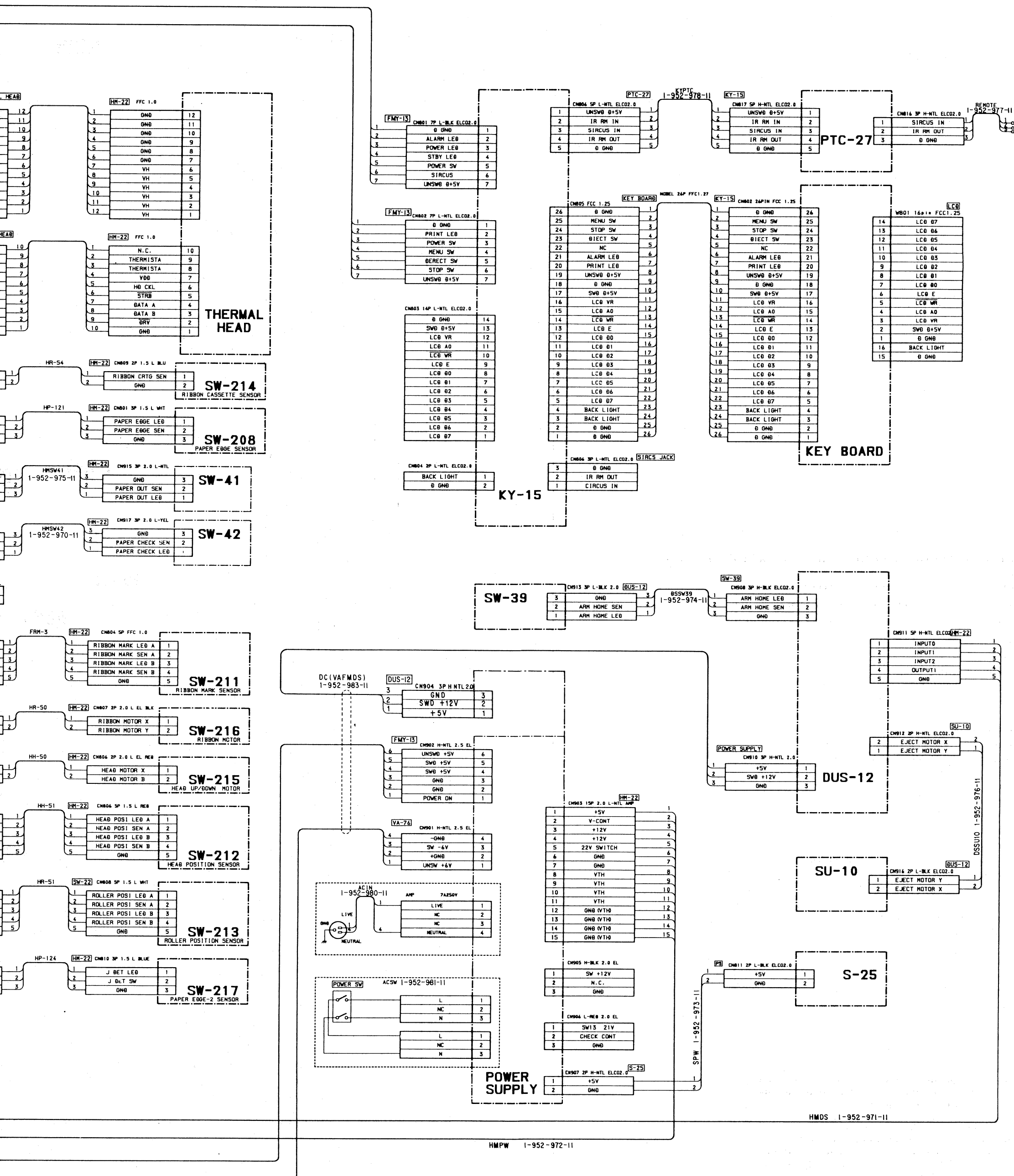




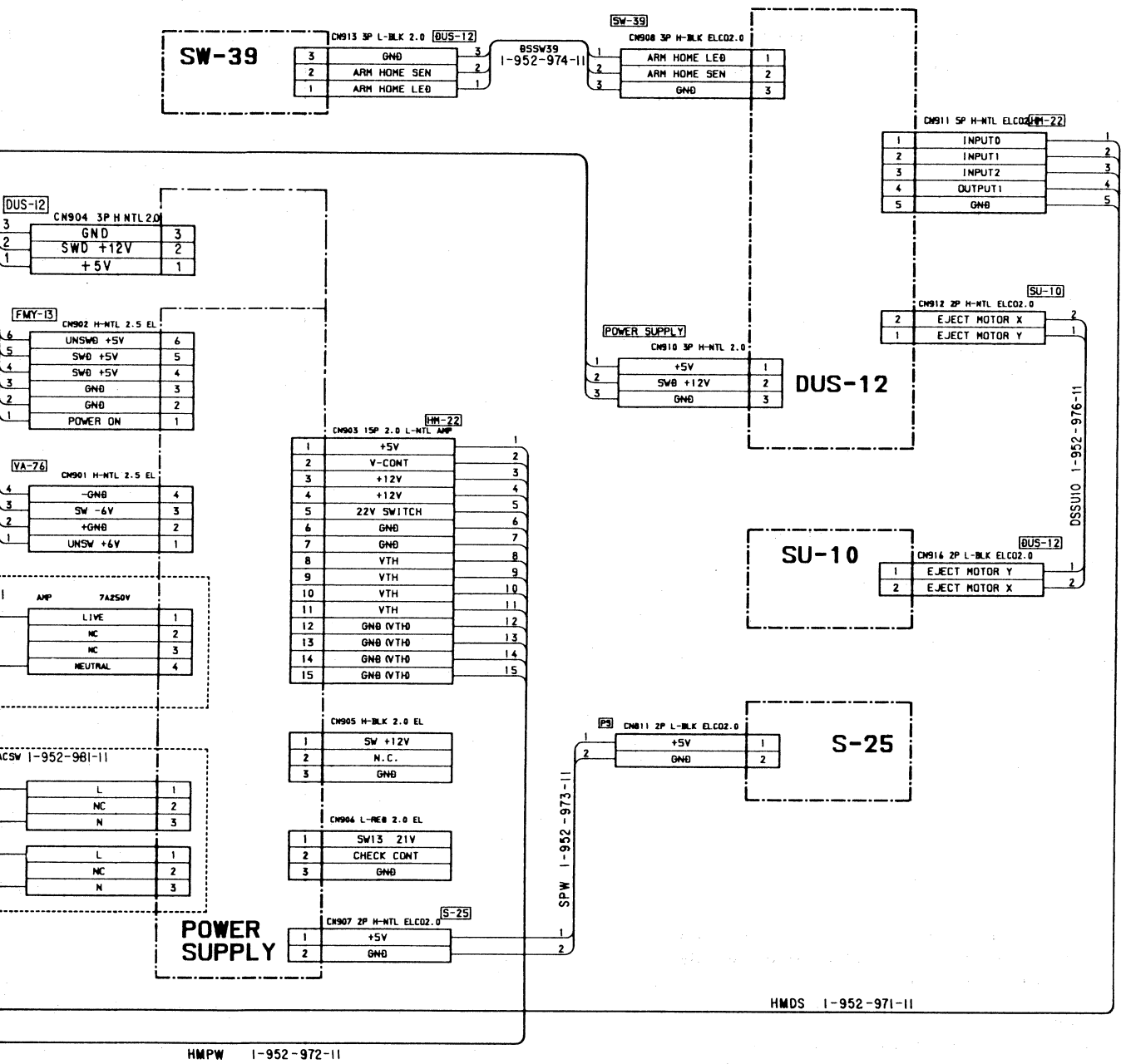
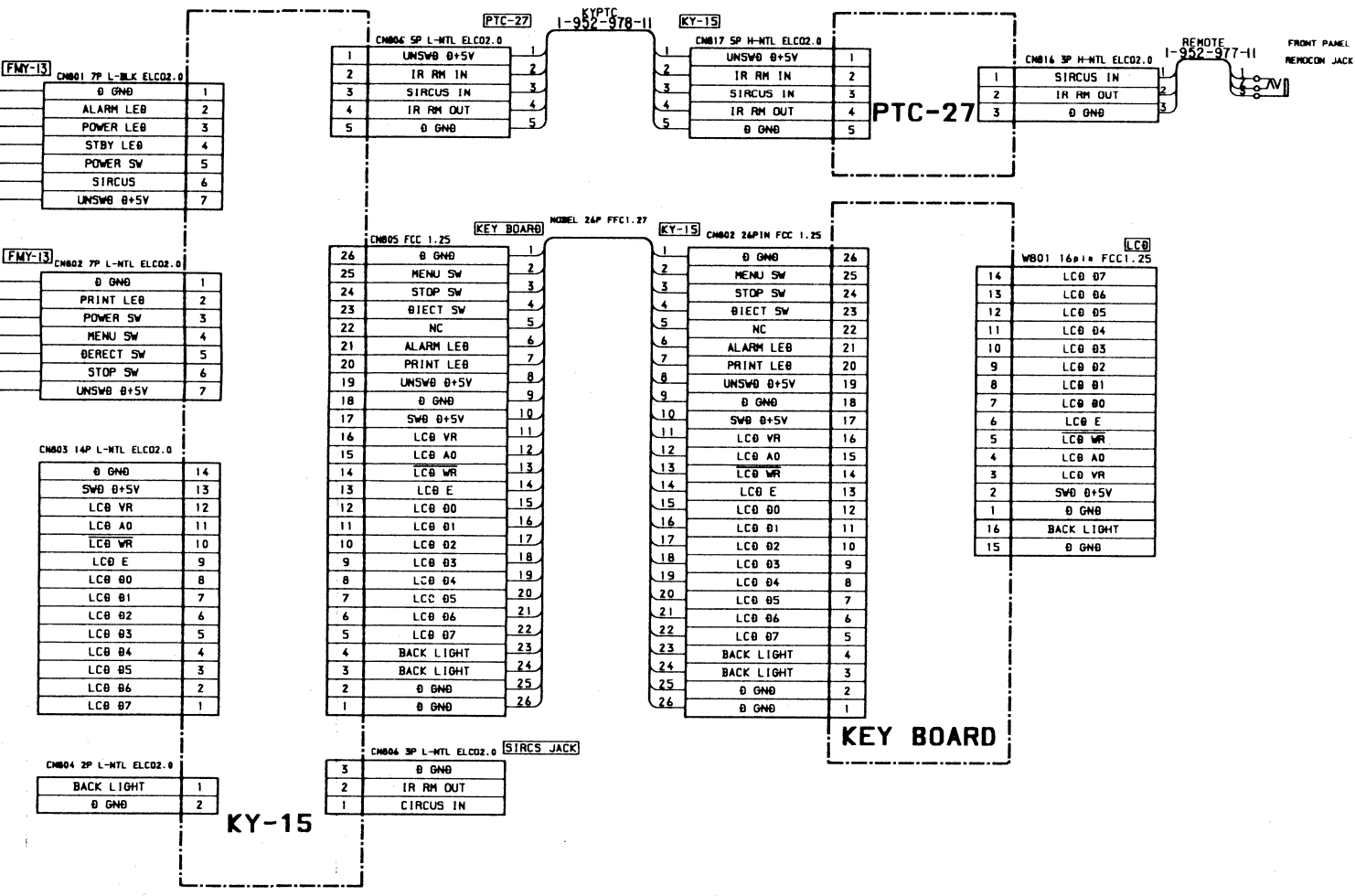
4-1. FRAME SCHEMATIC DIAGRAM







19 20 21 22 23 24 25 26 27



—

2

3

4

A

B

C

D

E**F**

G

H

1

J |

K

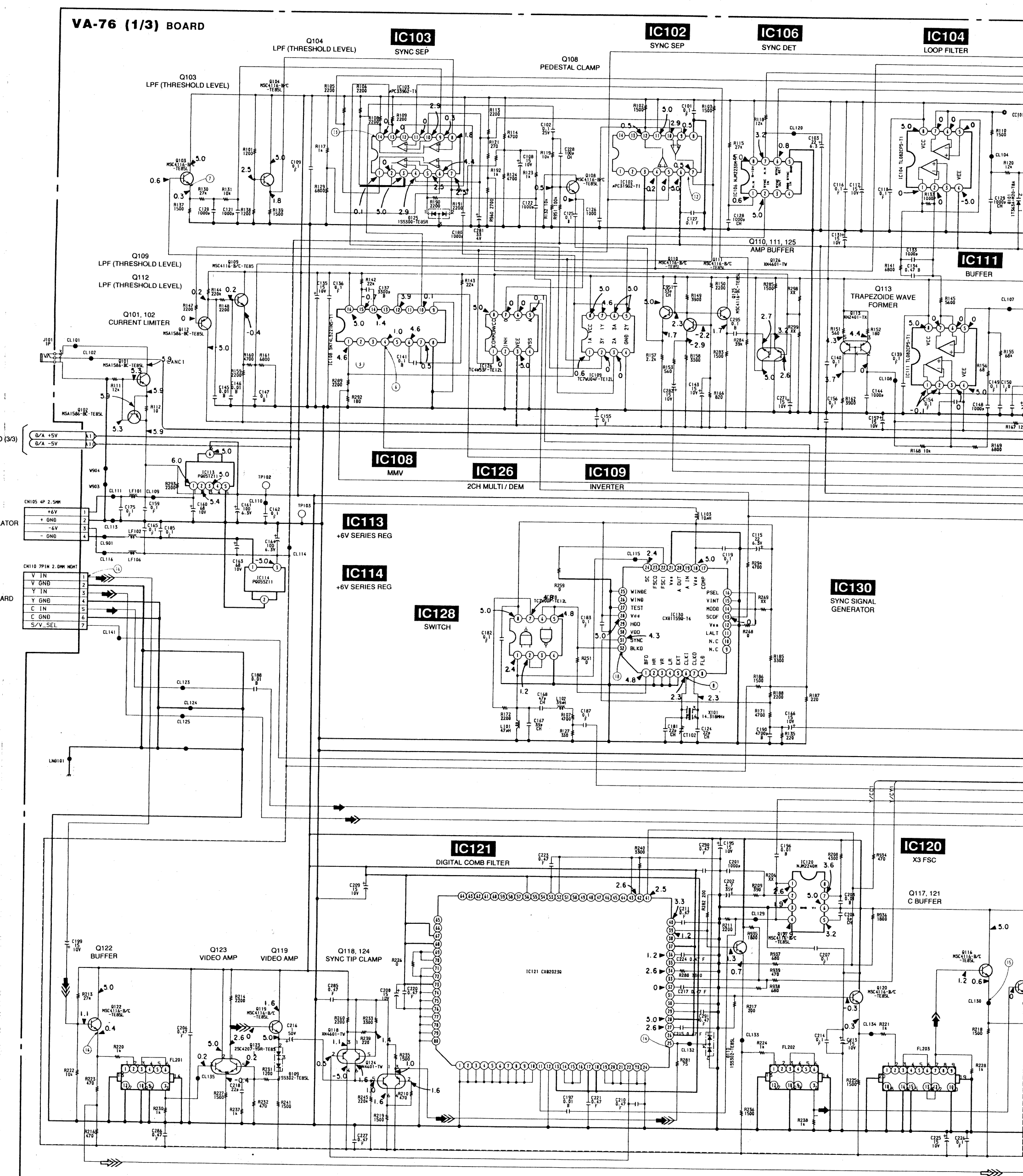
1

M

N |

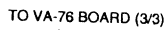
Note: Les composants identifiés par une trame et par une marque Δ sont d'une importance critique pour la sécurité. Ne les remplacer que par des pièces de numéro spécifié.



VA-76 (1/3) BOARD

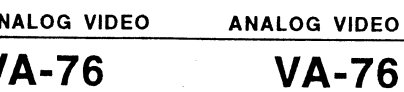
	VIDEO SIGNAL		
	CHROMA	Y	Y/CHROMA
REC	➡	➡➡	➡➡➡
PB	➡	➡➡	➡➡➡

21



	VIDEO SIGNAL		
	CHROMA	Y	Y/CHROMA
REC	➡	➡➡	➡➡➡
PB	➡	➡➡	➡➡➡

15	16	17	18	19	20	21
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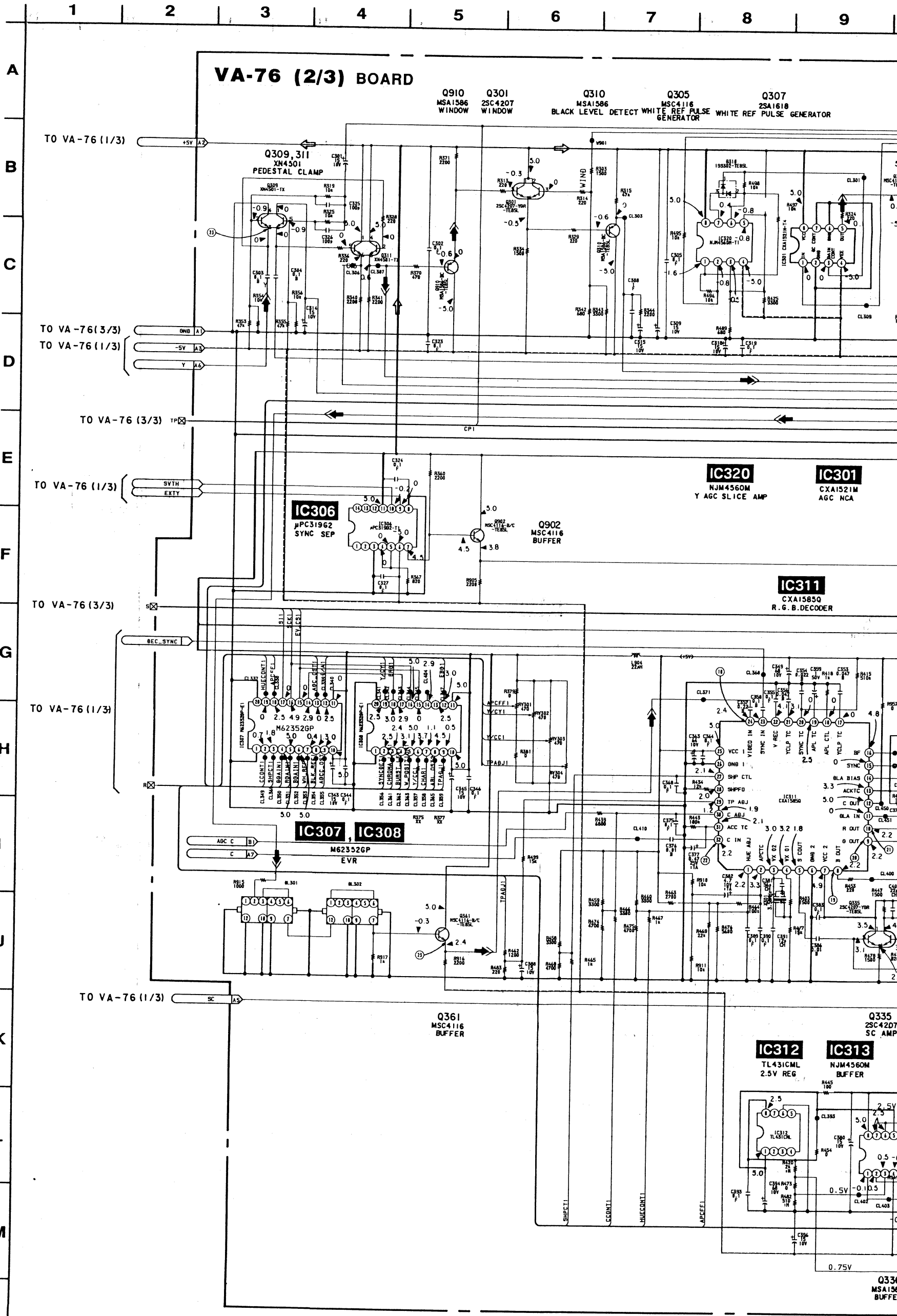


UP-1200A

VA-76 — 2/3 — (ANALOG VIDEO)

• SIGNAL PATH

	VIDEO SIGNAL		
	CHROMA	Y	Y/CHROMA
REC	→	→	
PB			



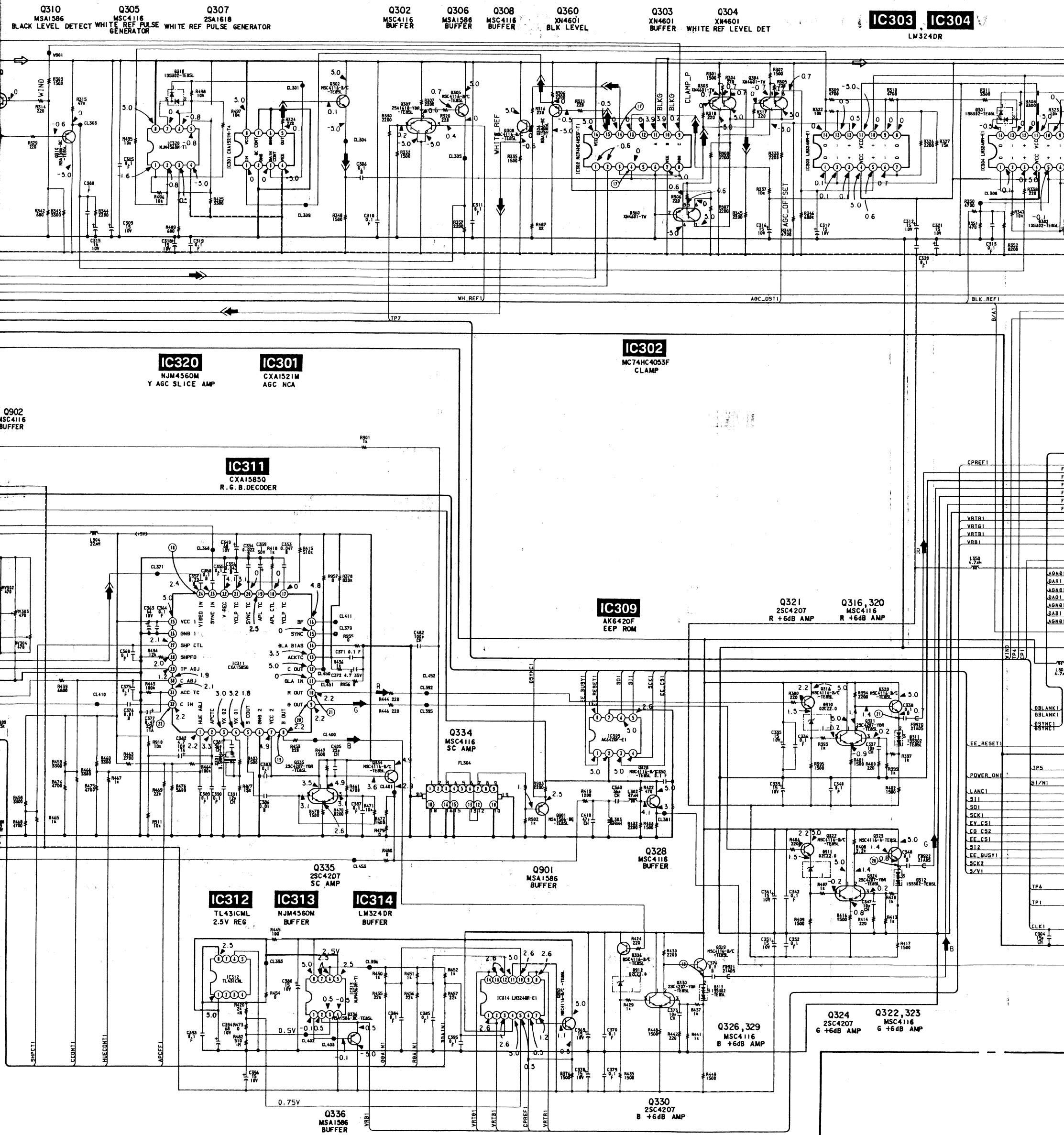
• SIGNAL PATH

	VIDEO SIGNAL		
	CHROMA	Y	Y/CHROMA
REC	→	→	
PB			

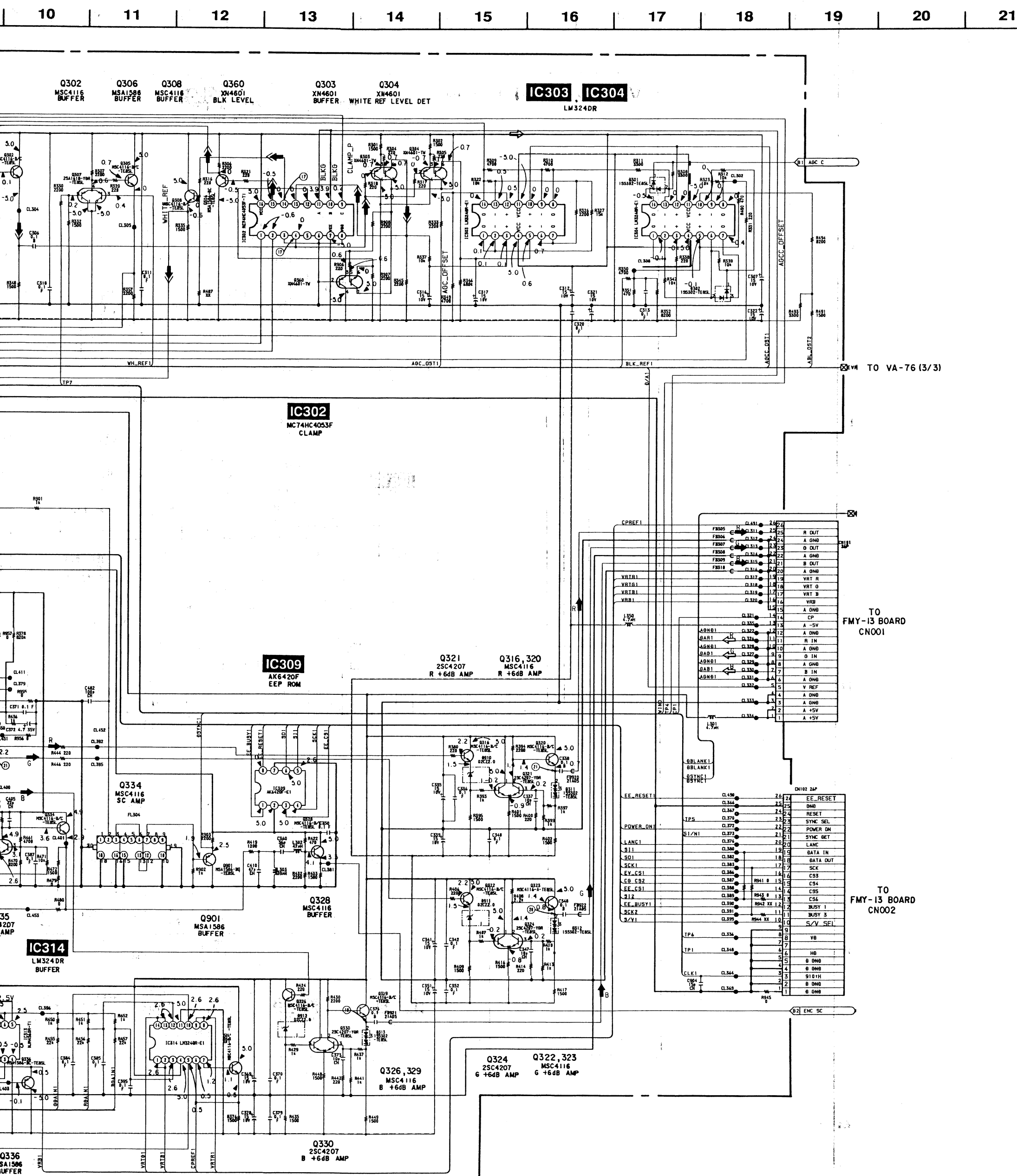
• SIGNAL PATH

VIDEO SIGNAL	REC	PB
ANALOG R	→ R	→ R
ANALOG G	→ G	→ G
ANALOG B	→ B	→ B

6 7 8 9 10 11 12 13 14 15 16 17



DEO SIGNAL	REC	PB
ANALOG R	➡ R	➡ R
ANALOG G	➡ G	➡ G
ANALOG B	➡ B	➡ B



UP-1200A

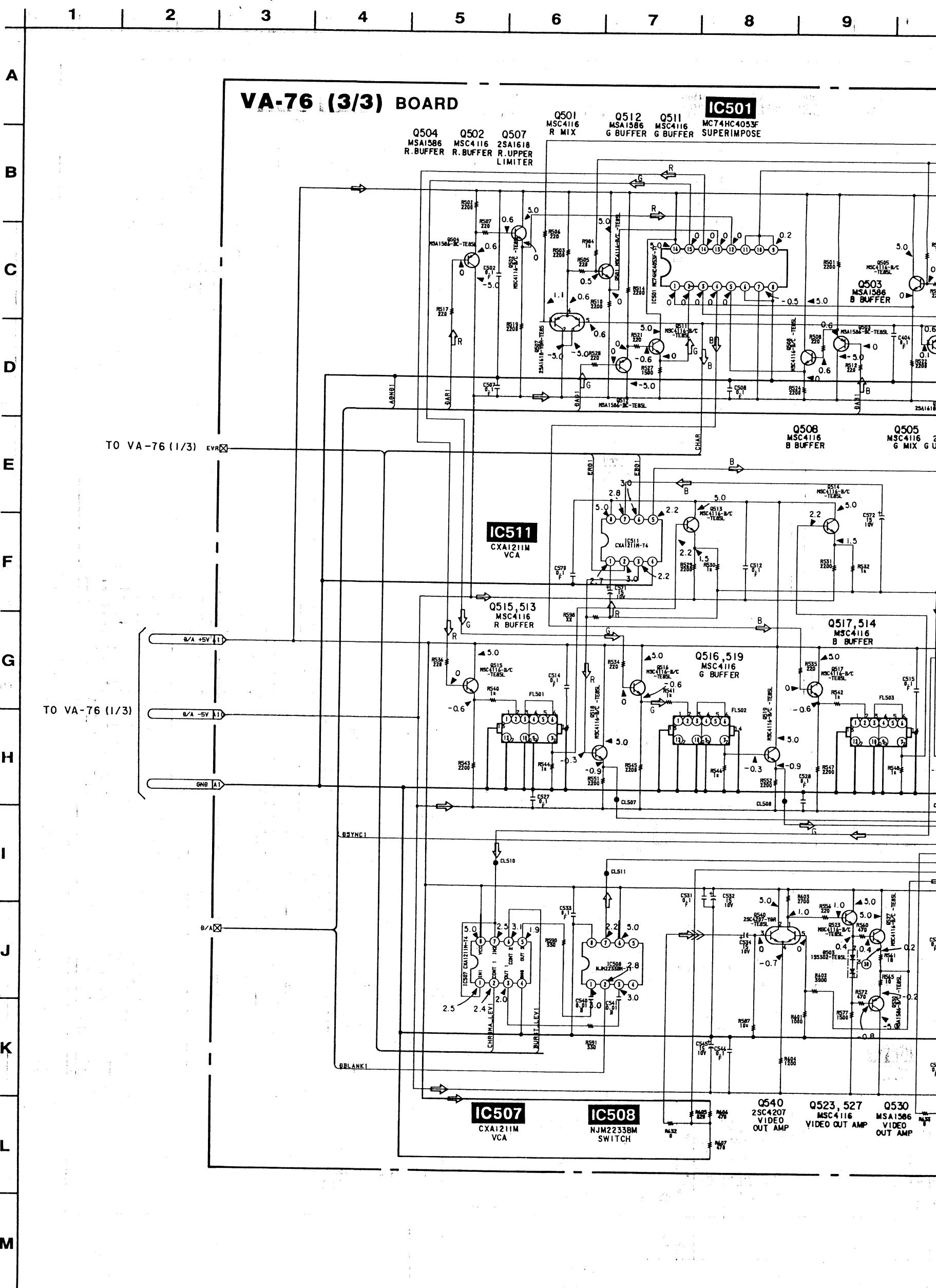
VA-76 — 3/3 — (ANALOG VIDEO)

• SIGNAL PATH

	VIDEO SIGNAL		
	CHROMA	Y	Y/CHROMA
REC			
PB	⇨	⇨⇨	⇨⇨⇨

• SIGNAL PATH

VIDEO SIGNAL	
ANALOG R	
ANALOG G	
ANALOG B	



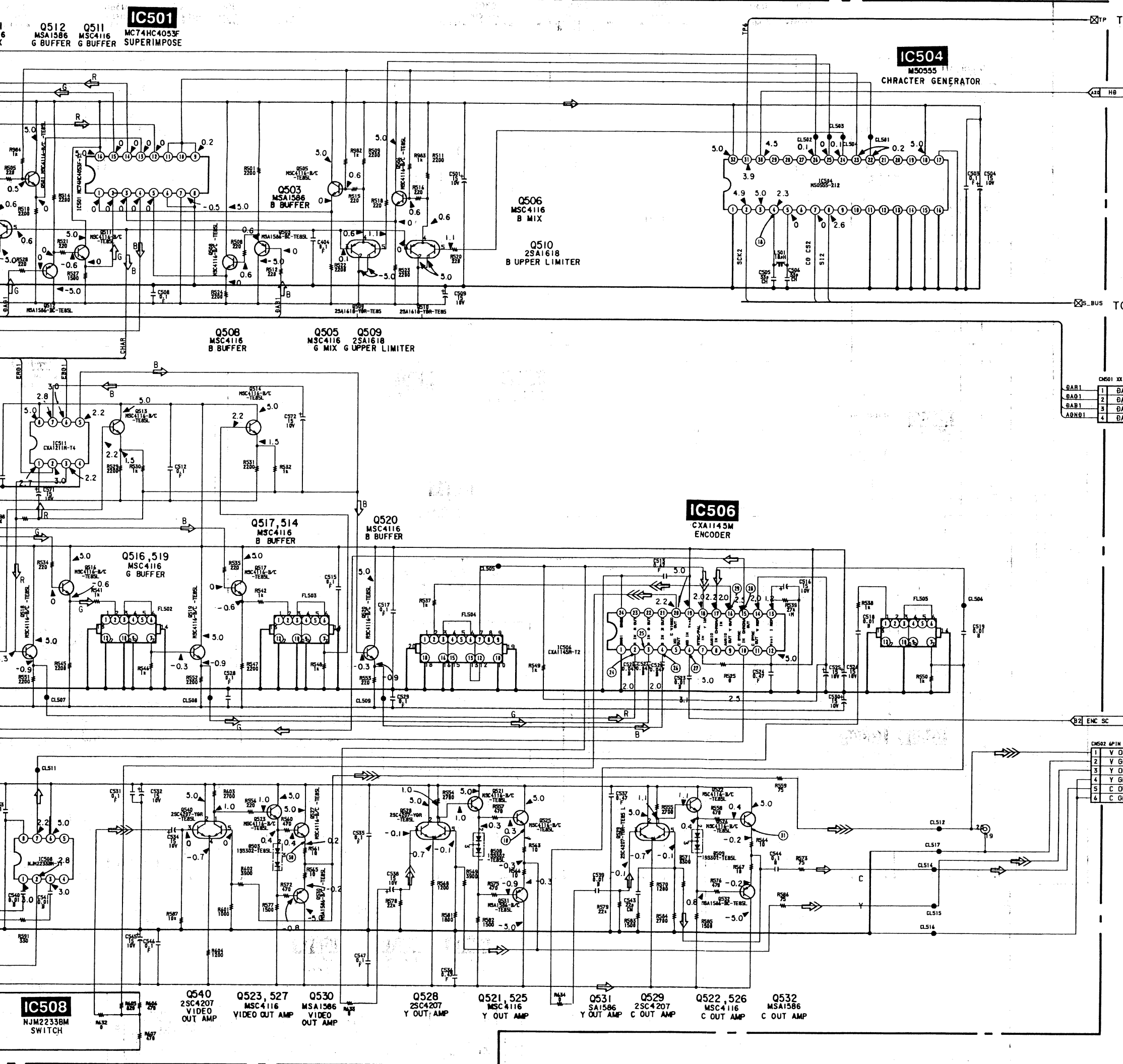
SIGNAL PATH

	VIDEO SIGNAL		
	CHROMA	Y	Y/CHROMA
REC			
PB	⇒	⇒⇒	⇒⇒⇒

• SIGNAL PATH

VIDEO SIGNAL	REC	PB
ANALOG R		⇒ R
ANALOG G		⇒ G
ANALOG B		⇒ B

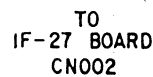
7 8 9 10 11 12 13 14 15 16 17

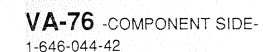
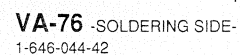


	11	12	13	14	15	16	17	18	19
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Q520
ISC4116
BUFFER





FB107	B-2
FB108	B-2
FB109	B-2
FB112	F-5
FB121	E-5
FB122	F-4
FB123	F-5
FB304	D-1
FB305	D-1
FB306	D-1
FB307	D-1
FB308	E-1
FB309	D-1
FB310	E-1
FB311	D-1
FB312	D-1
FB313	D-1
FB314	D-1
FB315	D-1
FB316	F-1
FB317	F-1
FB318	F-1
FB319	F-1
FB320	F-1
FB321	F-1
FB322	F-1
FB323	D-1
FB324	E-1
FB325	F-1
FB327	F-1
FB328	C-1
FB329	B-1
FB330	B-1
FB331	C-1
FB332	B-1
FB334	B-1
FB335	A-1

S:SOLDERING

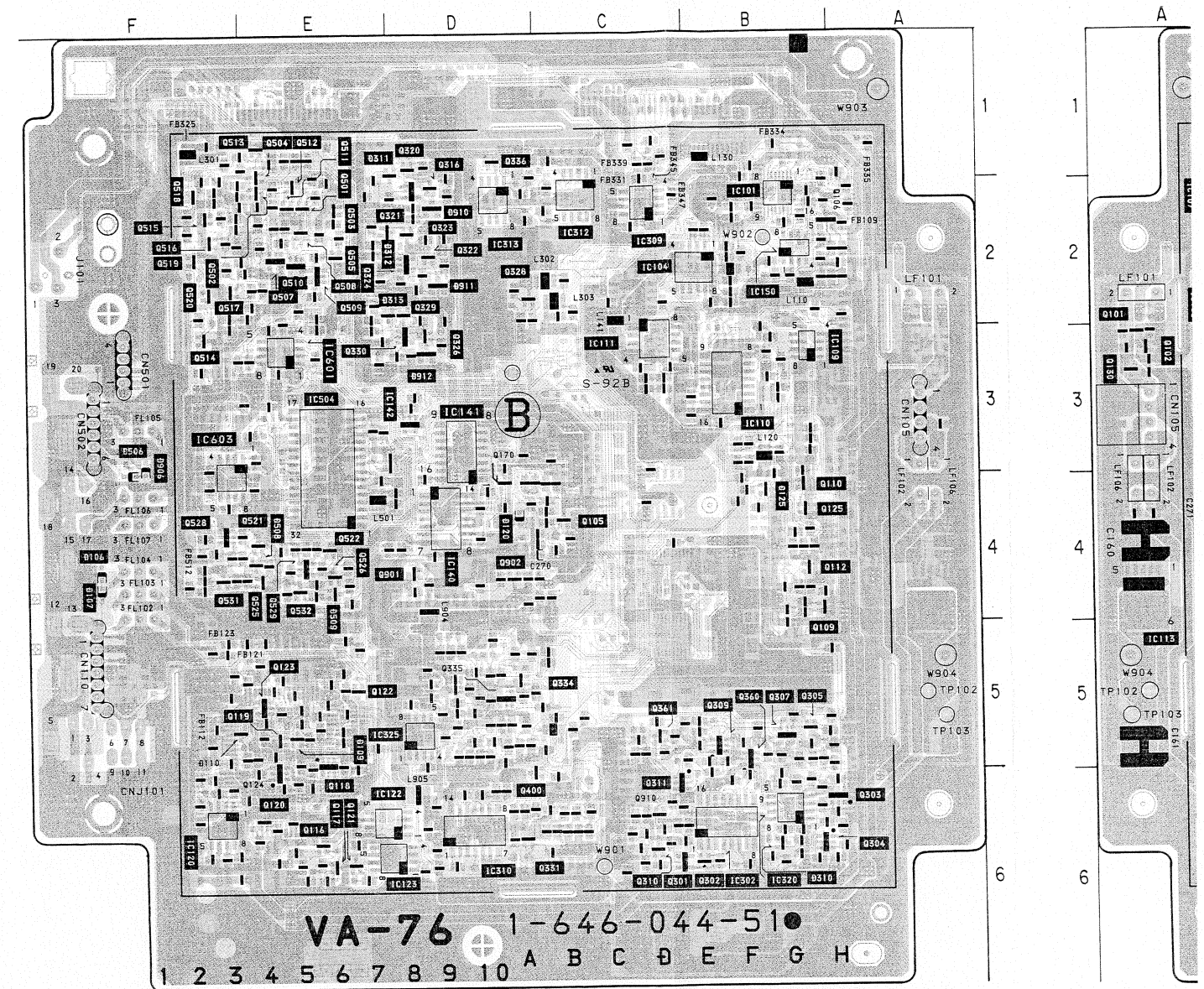
UP-1200AEPM

VA-76(B) (ANALOG VIDEO)

VA-76(B) BOARD

CN101	E-1	S	FB337	C-1	S	IC320	B-5	Q309	B-5
CN102	C-1	S	FB338	C-1	S	IC501	E-2	Q310	C-6
CN105	A-3	S	FB339	C-1	S	IC504	E-3	Q311	B-5
CN110	F-5	S	FB340	C-1	S	IC506	E-3	Q312	D-5
CN502	F-3	S	FB343	C-2	S	IC507	D-3	Q316	D-1
			FB344	C-2	S	IC508	D-3	Q320	D-1
			FB345	C-1	S	IC511	E-1	Q321	D-2
CT101	A-2	S	FB346	C-2	S	IC601	E-2	Q322	D-2
CT102	D-2	S	FB347	B-2	S	IC602	E-4	Q323	D-2
			FB348	C-2	S	IC603	E-3	Q324	D-2
D101	A-2	S	FB349	C-2	S			Q326	D-3
D109	E-5	S	FB510	E-4	S	J101	F-2	Q328	C-2
D110	E-5	S	FB511	E-4	S			Q329	D-2
D125	B-3	S	FB512	E-4	S	L101	D-4	Q330	D-2
D126	B-2	S	FB901	D-3	S	L102	D-4	Q331	C-6
D301	B-5	S	FB920	D-1	S	L103	C-3	Q334	C-5
D302	A-5	S	FB921	D-2	S	L110	B-2	Q335	D-5
D310	B-6	S	FB922	E-2	S	L120	B-3	Q336	D-1
D311	D-1	S				L130	B-1	Q350	C-2
D312	D-2	S	FL102	F-4	S	L140	B-3	Q360	B-5
D313	D-2	S	FL103	F-4	S	L141	C-2	Q361	C-5
D503	E-4	S	FL104	F-4	S	L301	E-1	Q501	E-2
D508	E-4	S	FL105	F-3	S	L302	C-2	Q502	E-1
D509	E-4	S	FL106	F-3	S	L303	C-2	Q503	E-2
D910	D-2	S	FL107	F-4	S	L350	D-1	Q504	E-1
D911	D-2	S	FL201	E-4	S	L501	D-3	Q505	E-2
D912	D-3	S	FL202	E-6	S	L901	D-1	Q506	E-2
			FL203	E-6	S	L902	D-2	Q507	E-2
DL301	C-6	S	FL301	C-6	S	L903	D-2	Q508	E-2
DL302	C-5	S	FL304	D-4	S	L904	D-4	Q509	E-2
DL303	C-5	S	FL501	E-2	S	L905	D-5	Q510	E-2
			FL502	E-2	S			Q511	E-1
FB107	B-2	S	FL503	E-2	S	LF101	A-2	Q512	E-1
FB108	B-2	S	FL504	E-3	S	LF102	A-3	Q513	E-1
FB109	B-2	S	FL505	E-3	S	LF106	A-3	Q514	E-2
FB112	E-5	S						Q515	E-2
FB121	E-4	S	IC102	B-4	S	Q101	A-2	Q516	E-2
FB122	E-4	S	IC103	B-3	S	Q102	A-2	Q517	E-2
FB123	E-5	S	IC104	B-2	S	Q103	A-4	Q518	E-2
FB304	D-1	S	IC106	C-2	S	Q104	B-3	Q519	E-2
FB305	D-1	S	IC107	A-2	S	Q105	C-4	Q520	E-2
FB306	D-1	S	IC108	A-2	S	Q106	A-2	Q521	E-4
FB307	D-1	S	IC109	B-2	S	Q108	B-4	Q522	E-4
FB308	D-1	S	IC110	B-3	S	Q109	B-4	Q523	E-4
FB309	D-1	S	IC111	C-2	S	Q110	B-3	Q525	E-4
FB310	D-1	S	IC112	B-3	S	Q111	A-3	Q526	E-4
FB311	D-1	S	IC113	A-4	S	Q112	B-4	Q527	E-4
FB312	D-1	S	IC114	B-6	S	Q113	B-2	Q528	E-4
FB313	D-1	S	IC119	B-2	S	Q116	E-6	Q529	E-4
FB314	D-1	S	IC121	E-5	S	Q117	E-6	Q530	E-4
FB315	D-1	S	IC122	D-5	S	Q118	E-5	Q531	E-4
FB316	F-1	S	IC123	D-6	S	Q119	E-5	Q532	E-4
FB317	F-1	S	IC125	B-3	S	Q120	D-6	Q540	E-4
FB318	F-1	S	IC126	A-3	S	Q121	D-6	Q601	E-3
FB319	F-1	S	IC128	D-3	S	Q122	E-5	Q602	E-3
FB320	F-1	S	IC130	C-3	S	Q123	E-5	Q901	D-4
FB321	F-1	S	IC301	B-5	S	Q124	E-5	Q902	C-4
FB322	F-1	S	IC302	B-5	S	Q125	B-3	Q910	C-5
FB323	D-1	S	IC303	B-5	S	Q126	A-4		
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FB325	E-1	S	IC306	C-4	S	Q171	C-3	RV302	C-4
FB327	C-1	S	IC307	B-4	S	Q301	B-6	RV303	C-4
FB328	C-1	S	IC308	B-4	S	Q302	B-6	RV304	C-4
FB329	B-1	S	IC309	C-2	S	Q303	A-5		
FB330	B-1	S	IC310	D-6	S	Q304	A-6	X101	C-4
FB331	C-1	S	IC311	D-5	S	Q305	B-5	X102	D-3
FB332	B-1	S	IC312	C-2	S	Q306	B-5	X301	D-5
FB334	B-1	S	IC313	D-2	S	Q307	B-5		
FB335	A-1	S	IC314	C-1	S	Q308	B-5		
FB336	C-2	S							

S:SOLDERING SIDE

VA-76 -SOLDERING SIDE-
1-646-044-51

ANALOG VIDEO

VA-76(B)

— 92 —

ANALOG VIDEO

VA-76(B)

ANALOG VIDEO

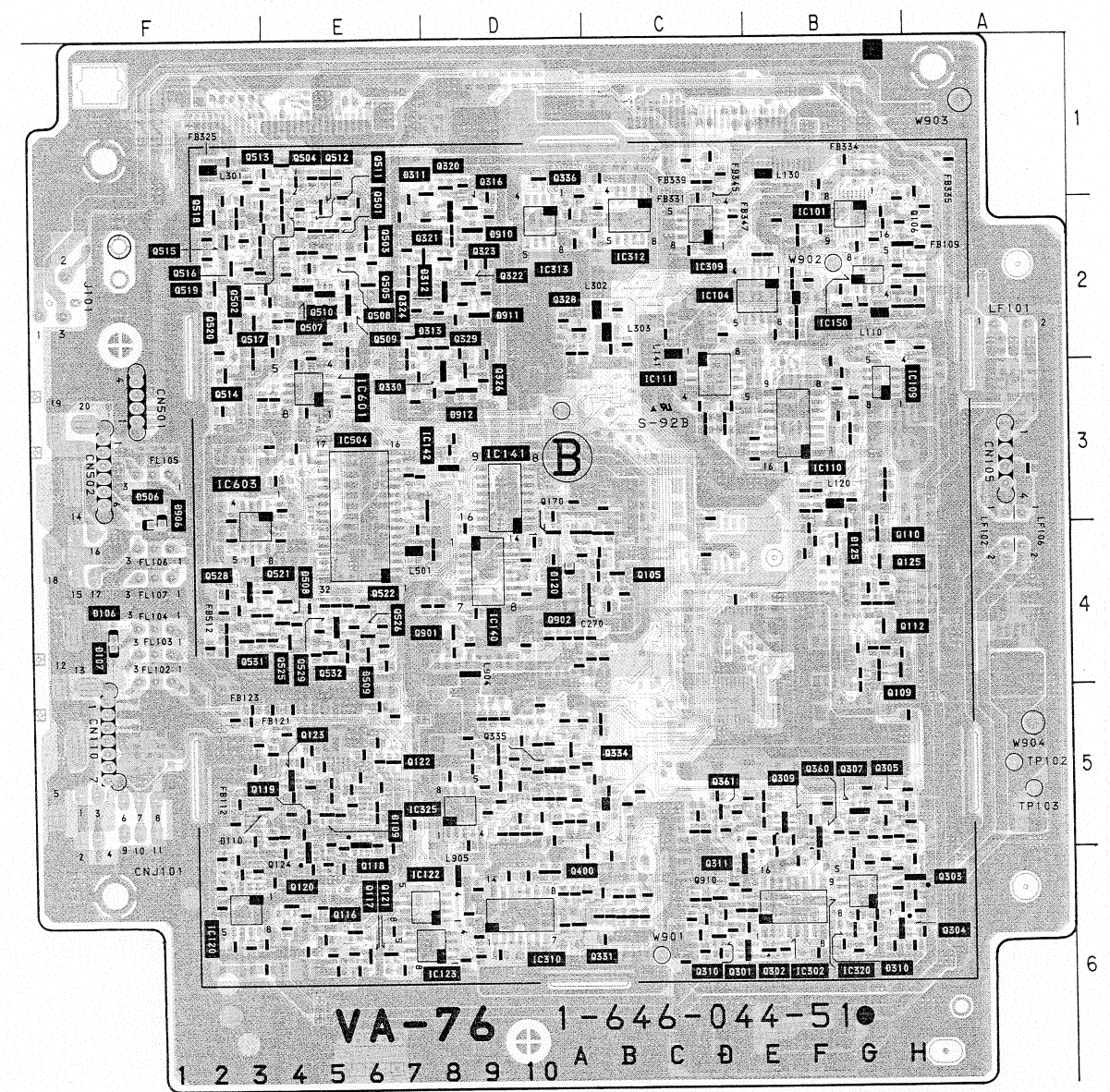
VA-76(B)

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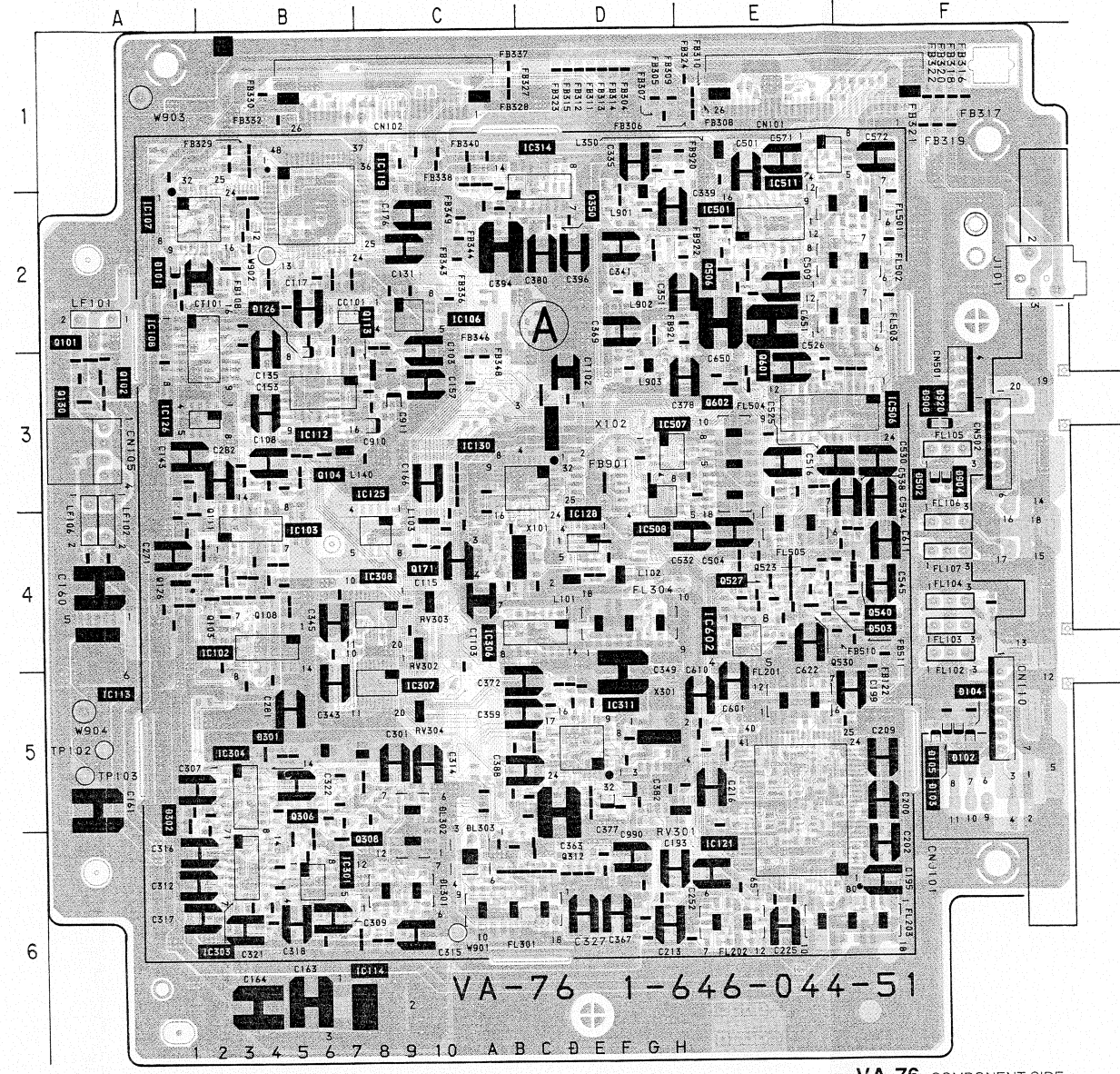
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328 Q-2
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334 Q-5
335 D-5
336 D-1 S
350 Q-2
360 B-5 S
361 Q-5
501 D-2
502 D-1
503 D-1
504 E-1
505 E-1
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530 E-4 S
531 E-4
532 E-4
540 E-4 S
601 E-3 S
602 E-3 S
901 D-4
902 C-4
910 C-5

V301 D-5 S
V302 Q-4 S
V303 C-4 S
V304 C-4 S

101 C-4 S
102 D-3 S
301 D-5 S



VA-76 -SOLDERING SIDE-
1-646-044-51



VA-76 -COMPONENT SIDE-
1-646-044-51

ANALOG VIDEO ANALOG VIDEO
VA-76(B) VA-76(B)

UP-1200AEPM

VA-76(B) — 1/3 — (ANALOG VIDEO)

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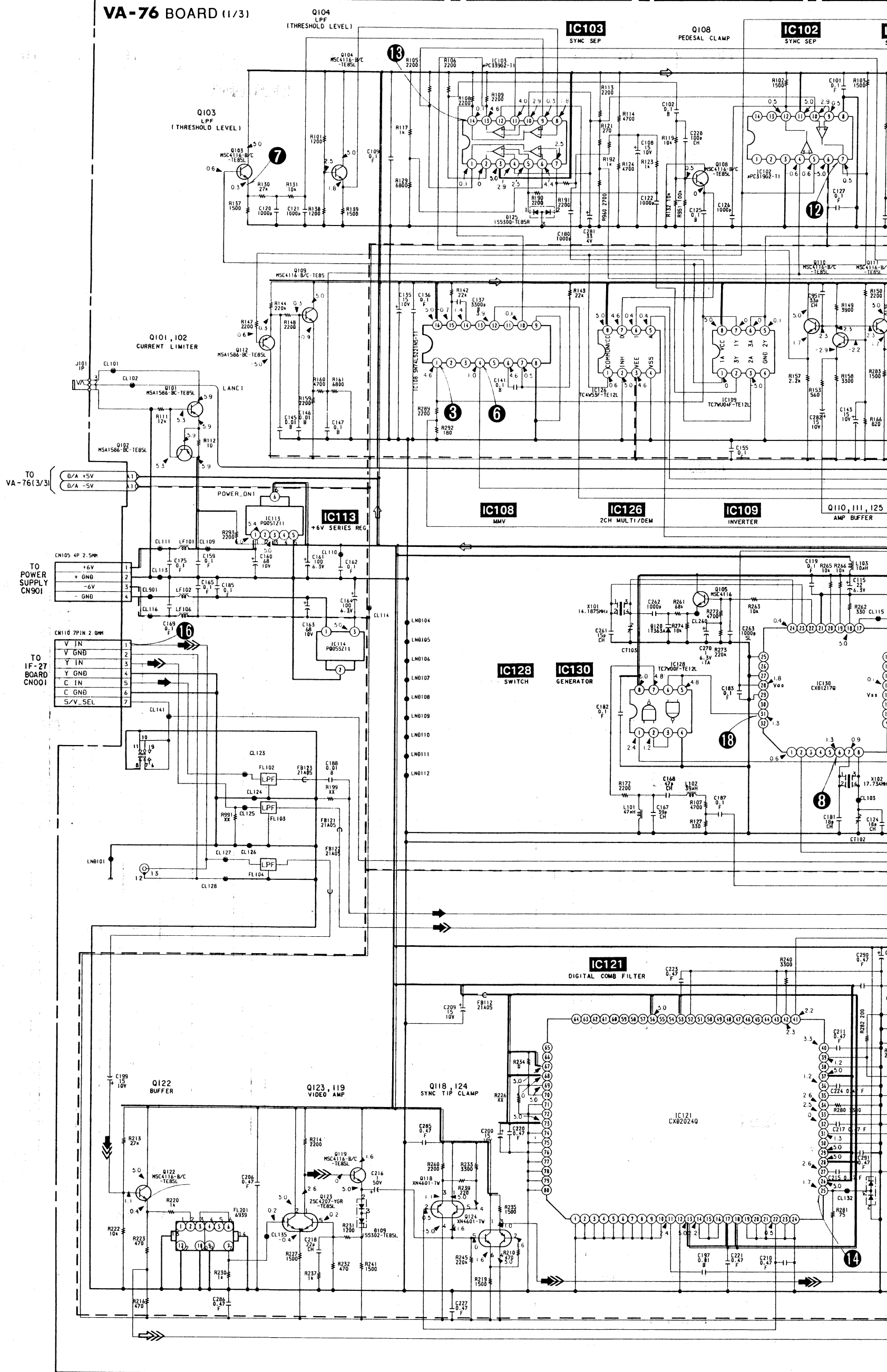
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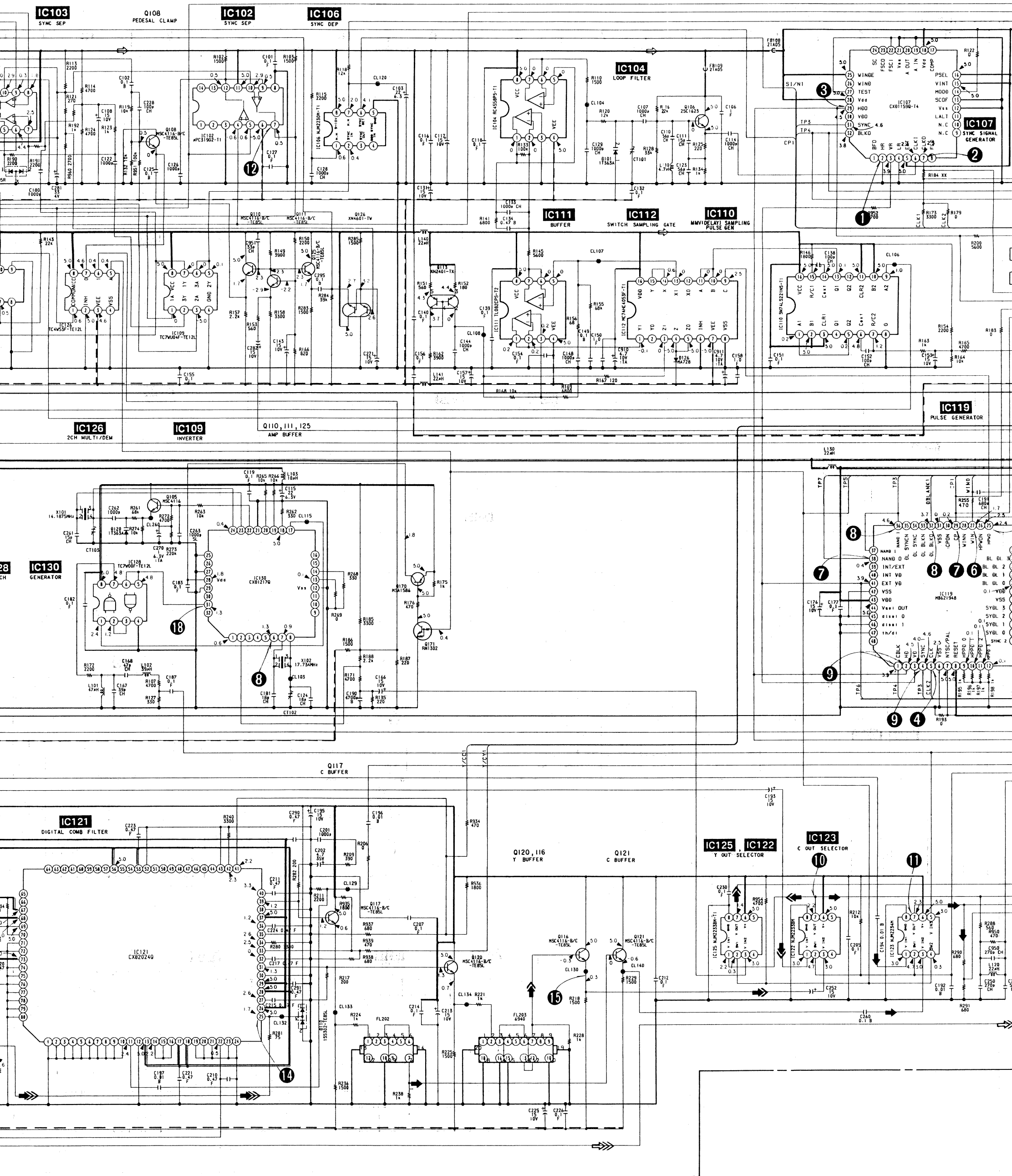
VA-76 BOARD (1/3)



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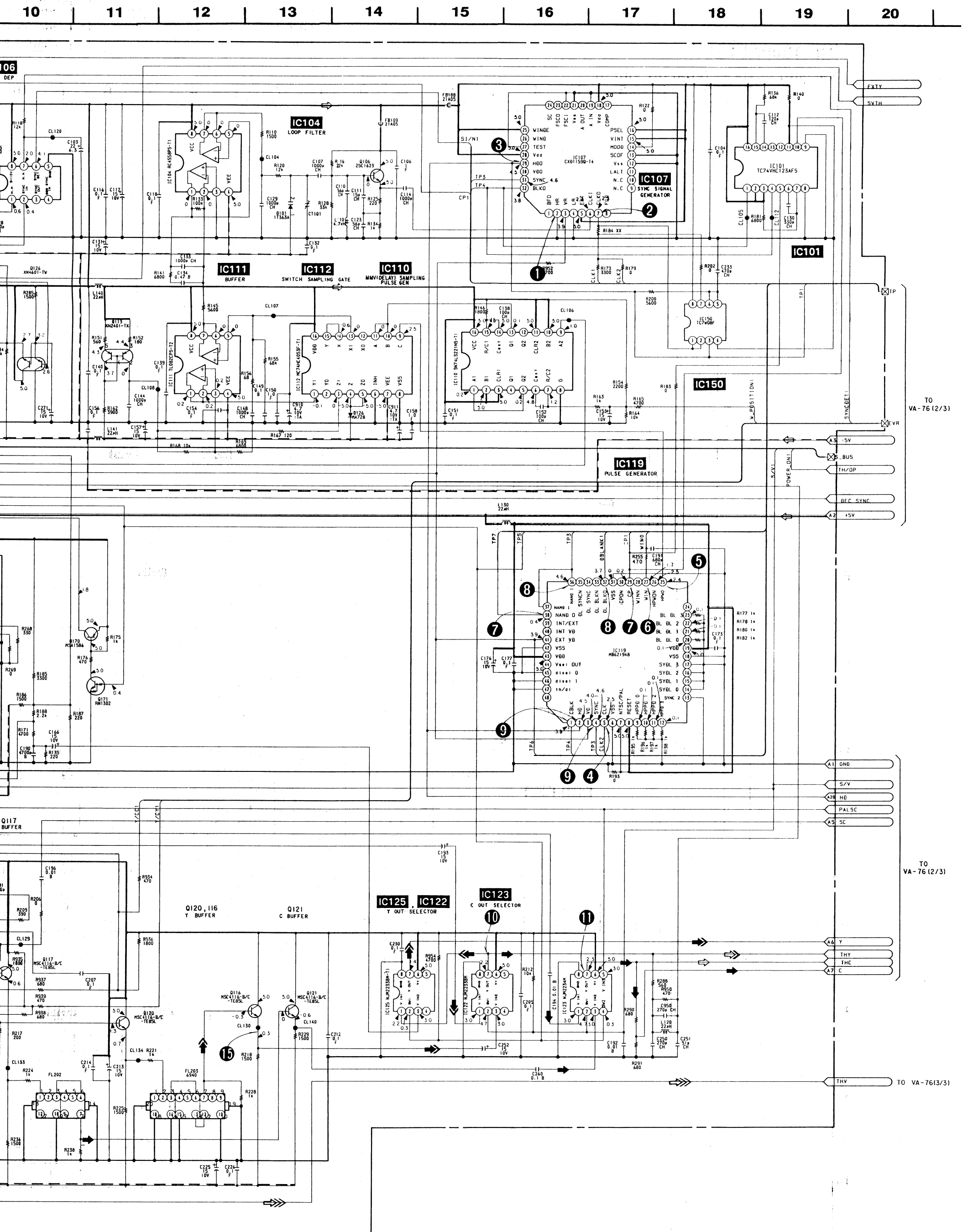
	VIDEO	
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REC	→	→
PB	→	→

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• SIGNAL PATH

	VIDEO SIGNAL		
	CHROMA	Y	Y/CHROMA
REC	→	→	→
PB	→	→	→

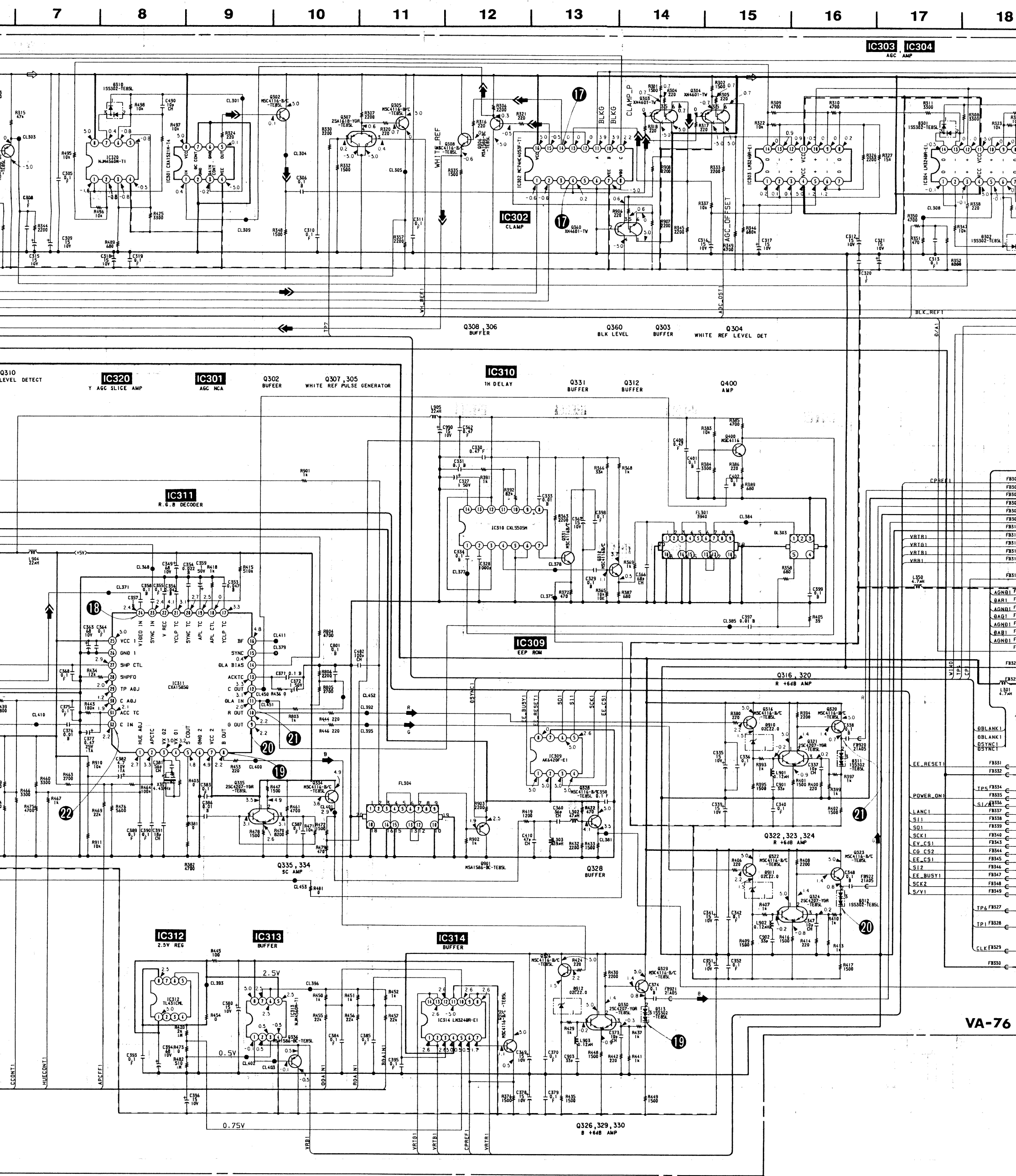


• SIGNAL PATH

	VIDEO SIGNAL		
	CHROMA	Y	Y/CHROMA
REC	→	→	
PB			

• SIGNAL PATH

VIDEO SIGNAL	REC	PB
ANALOG R	→ R	⇒ R
ANALOG G	→ G	⇒ G
ANALOG B	→ B	⇒ B



ANALOG VIDEO

ANALOG VIDEO

VA-76(B)

VA-76(B)

UP-1200AEPM

VA-76(B) — 3/3 — (ANALOG VIDEO)

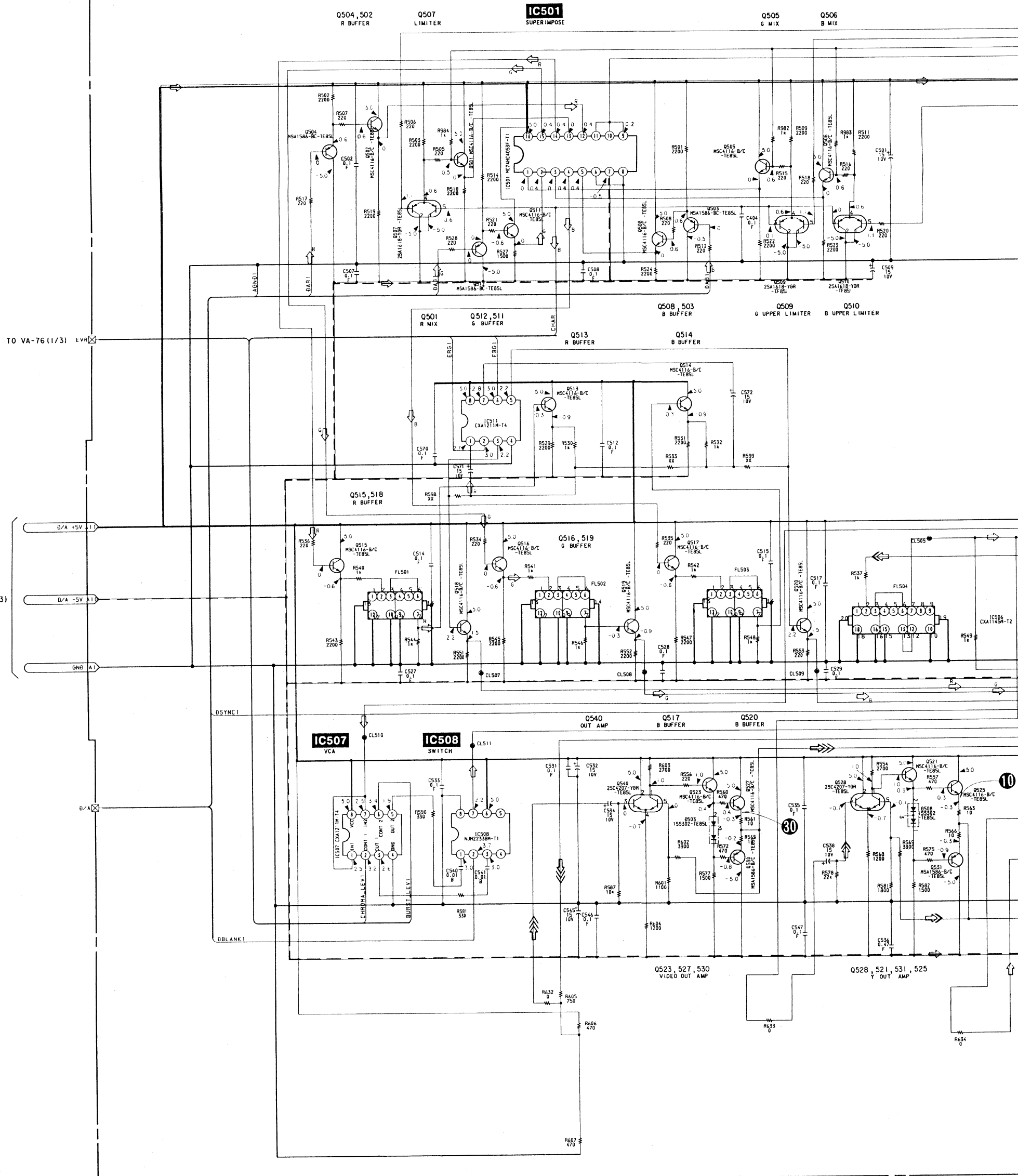
• SIGNAL PATH

	VIDEO SIGNAL		
	CHROMA	Y	Y/CHROMA
REC			
PB	⇒	⇒⇒	⇒⇒⇒

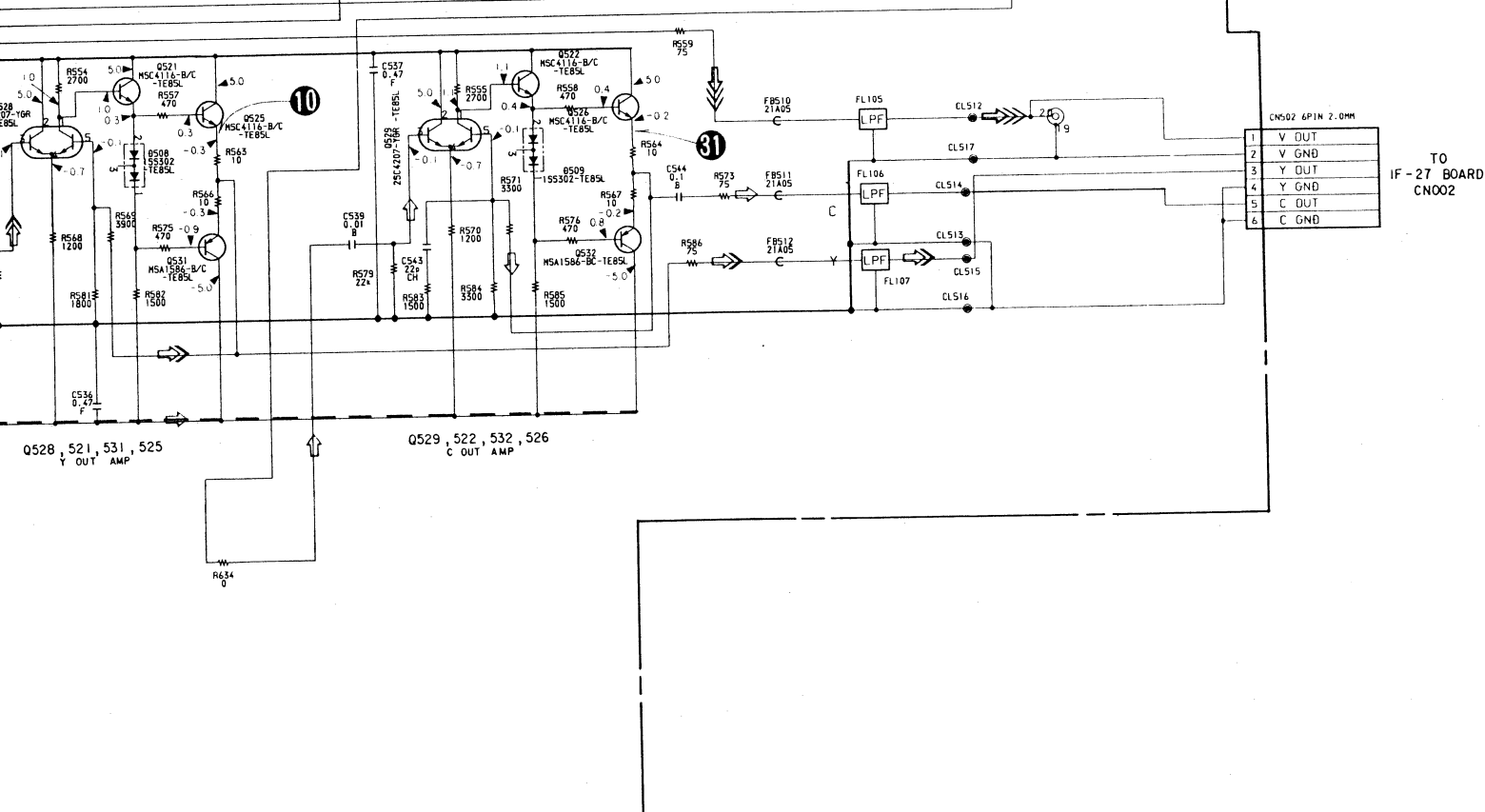
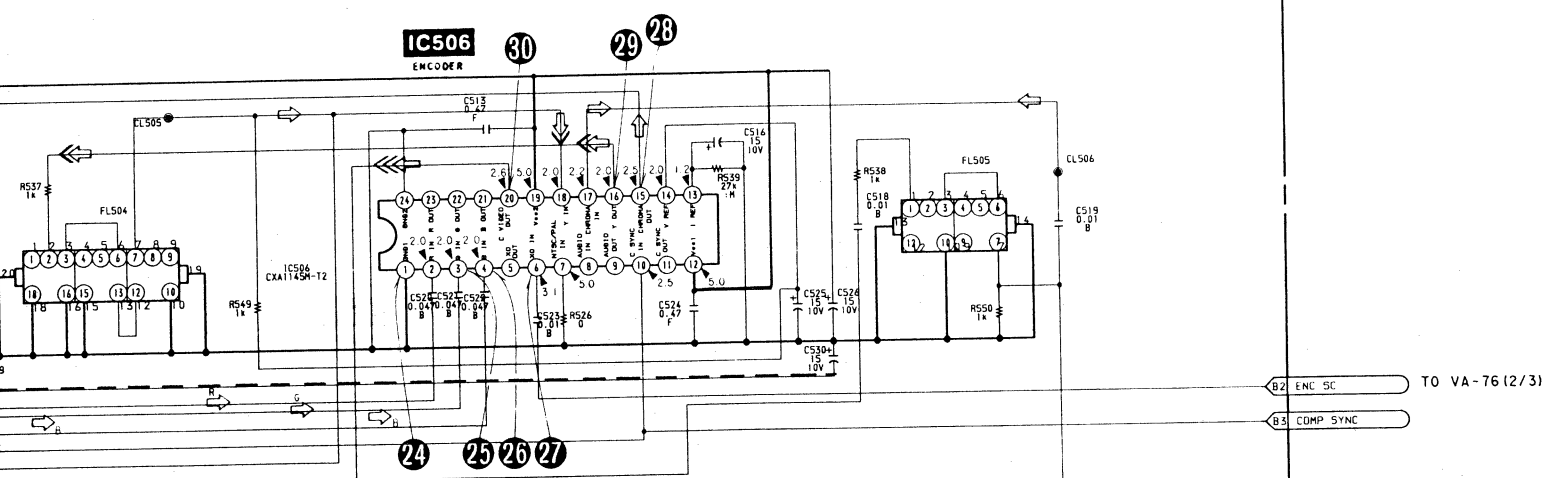
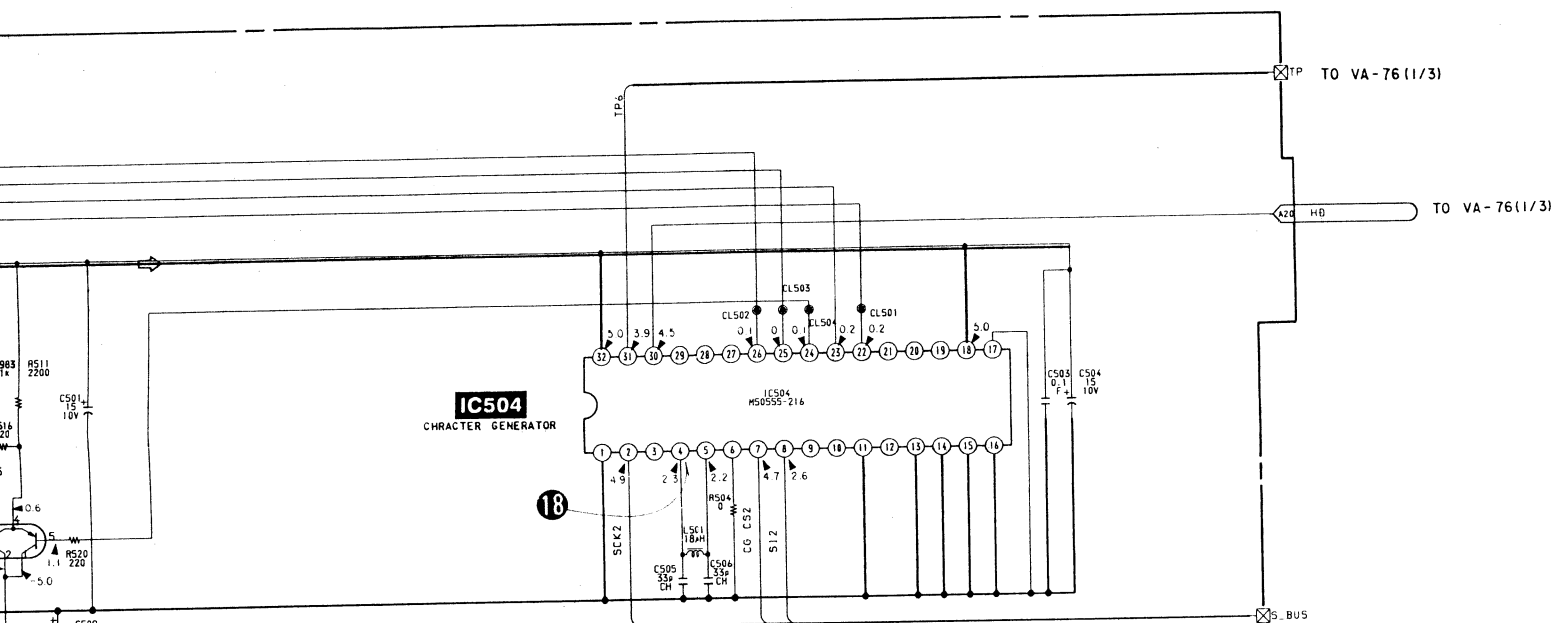
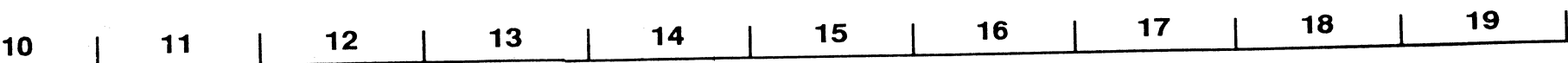
• SIGNAL PATH

VIDEO SIGNAL	REC	PB
ANALOG R		⇒
ANALOG G		⇒⇒
ANALOG B		⇒⇒⇒

VA-76 BOARD (3/3)



VIDEO SIGNAL	REC	PB
ANALOG R		⇒ R
ANALOG G		⇒ G
ANALOG B		⇒ B



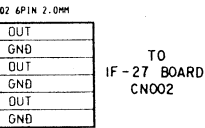


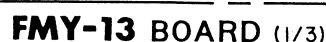
VA-76 (1/3)

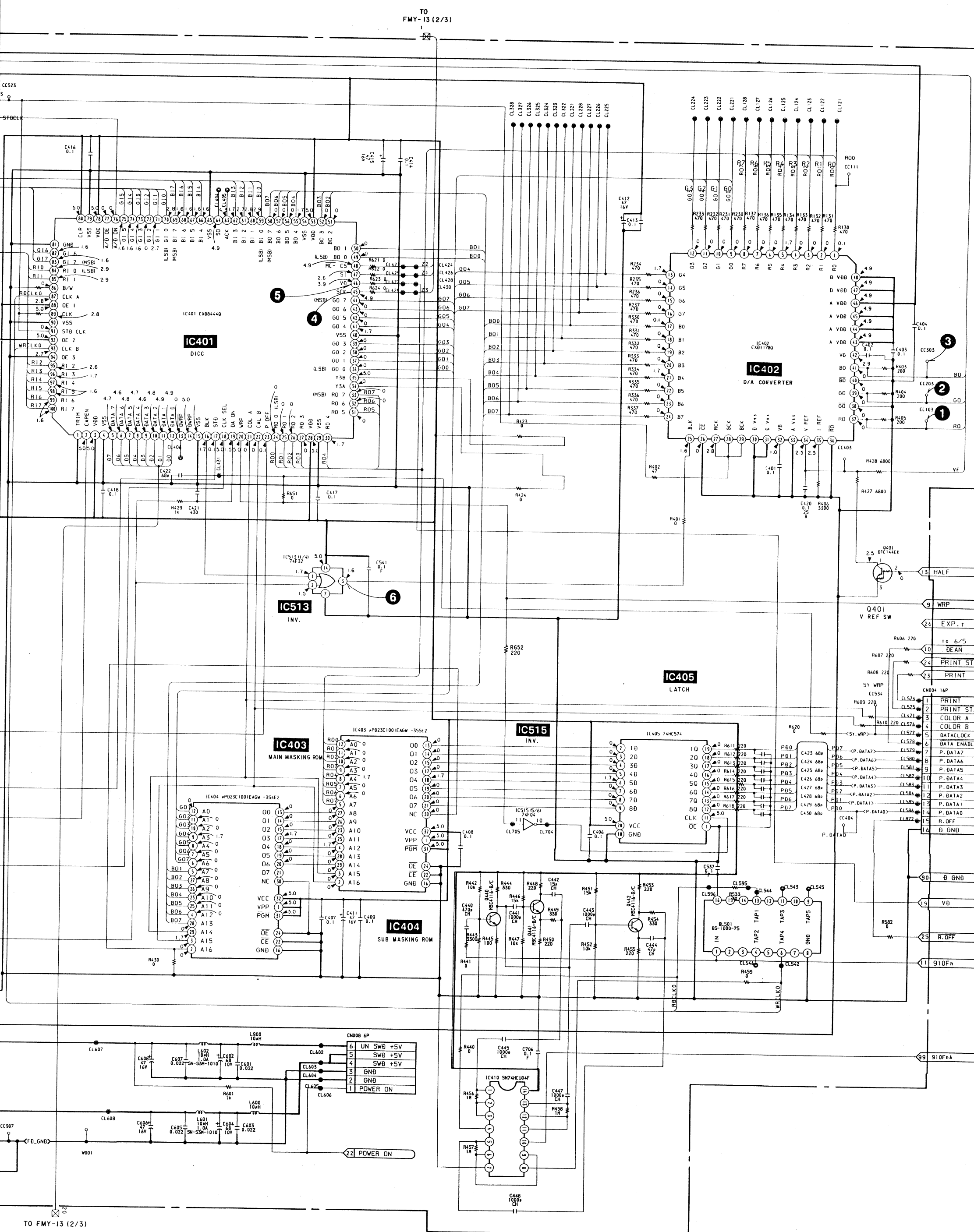
TO VA-76 (1/3)

TO VA-76 (2/3)

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FMY-13 BOARD (2/3)

TO FMY-13 (1/3)

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D RAM (R10-R13)

IC502

D RAM (R14-R17)

IC503

D RAM (G10-G13)

IC504

D RAM (G14-G17)

IC505

D RAM (B10-B13)

IC506

D RAM (B14-B17)

IC507

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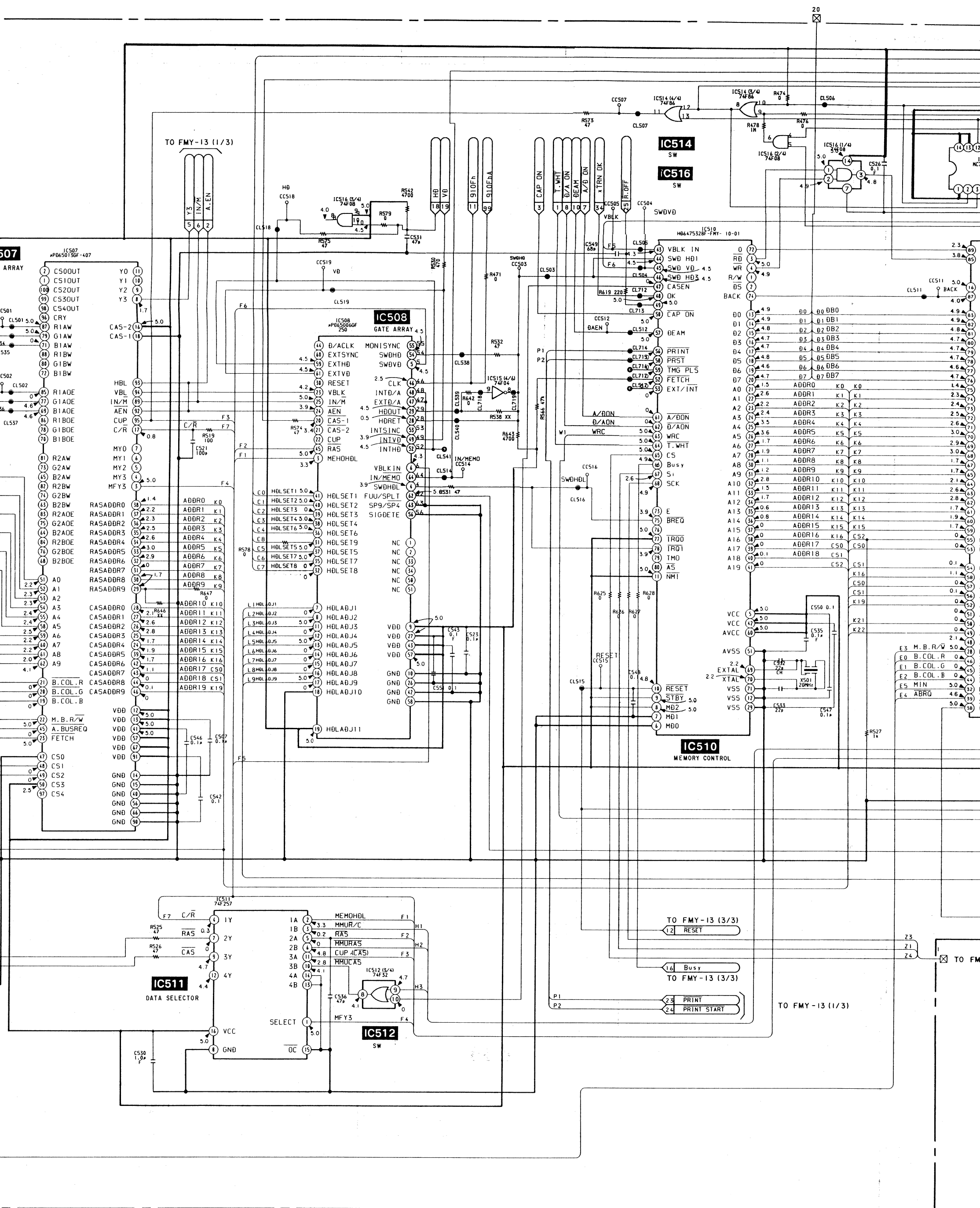
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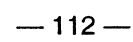
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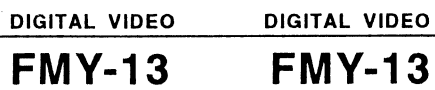
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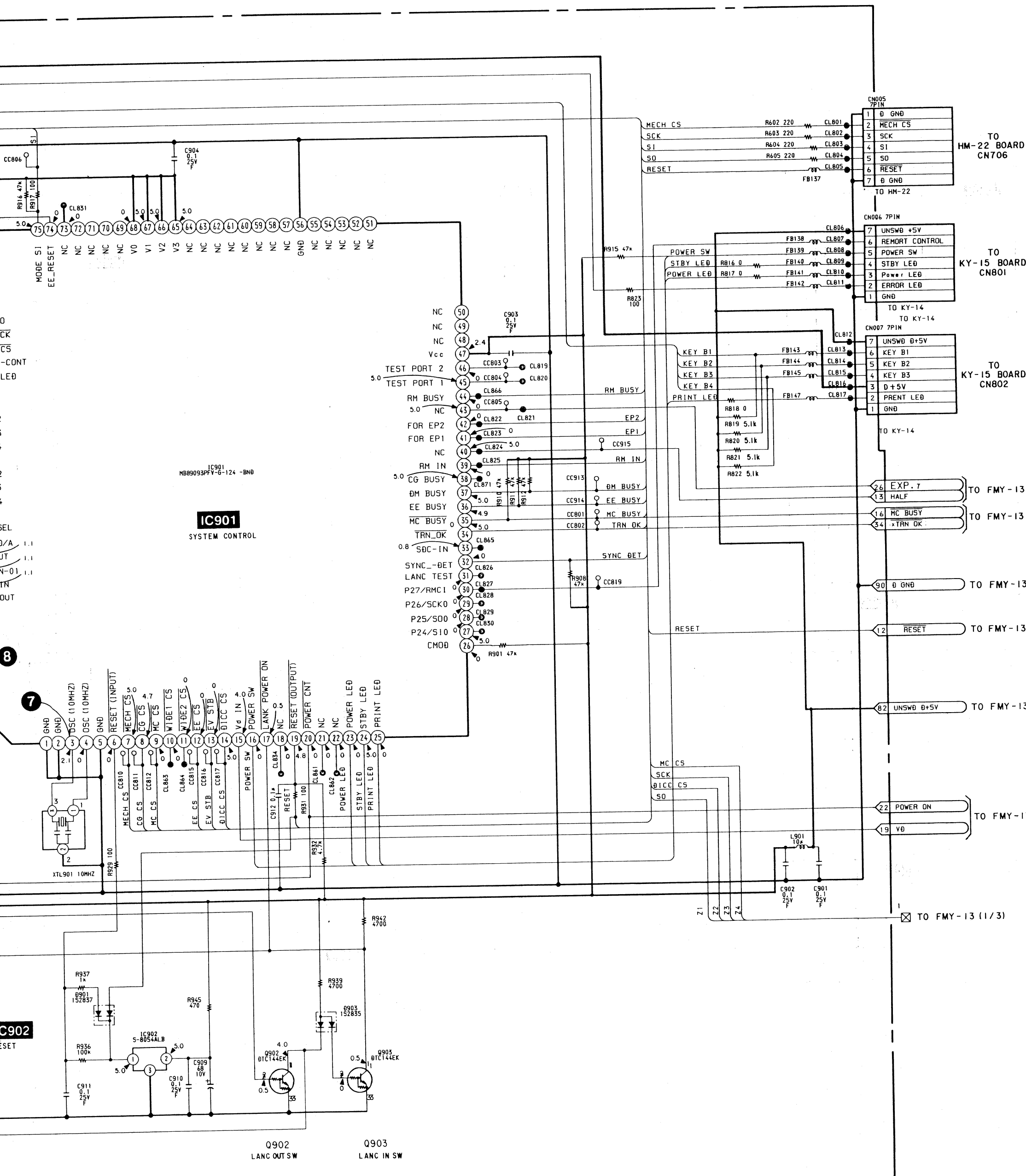
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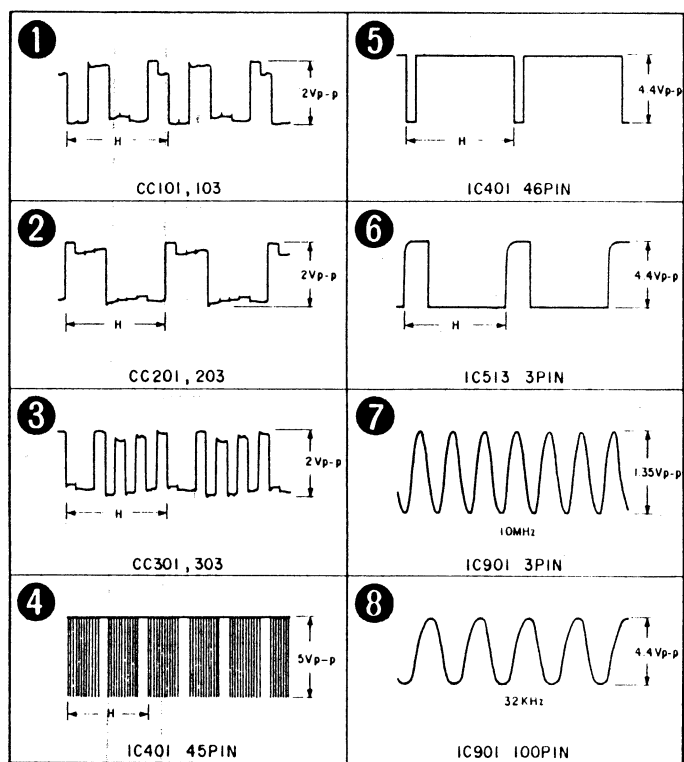
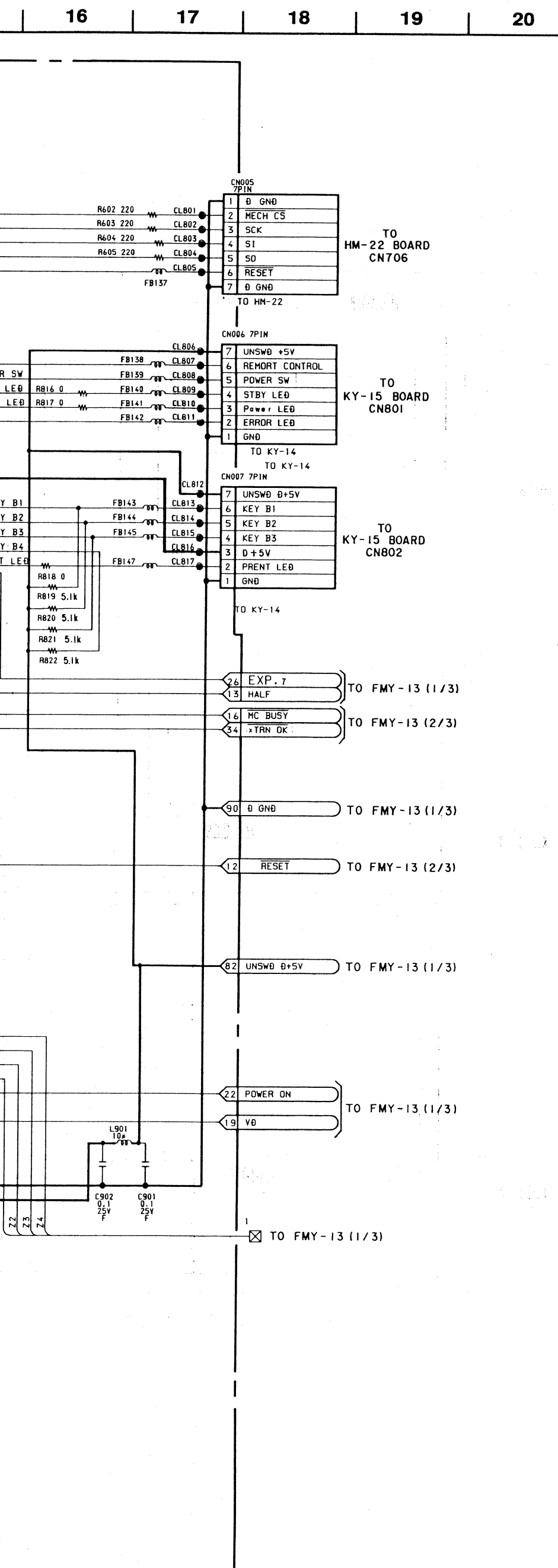




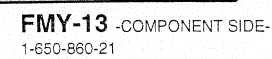
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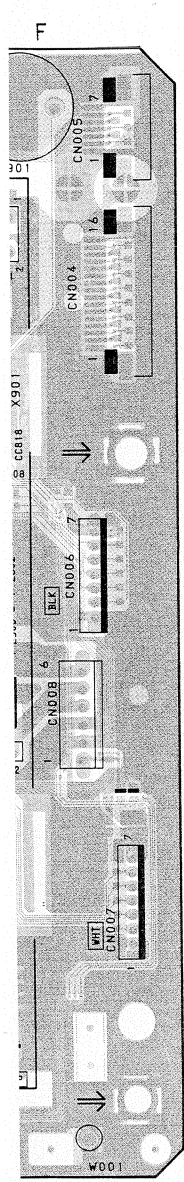




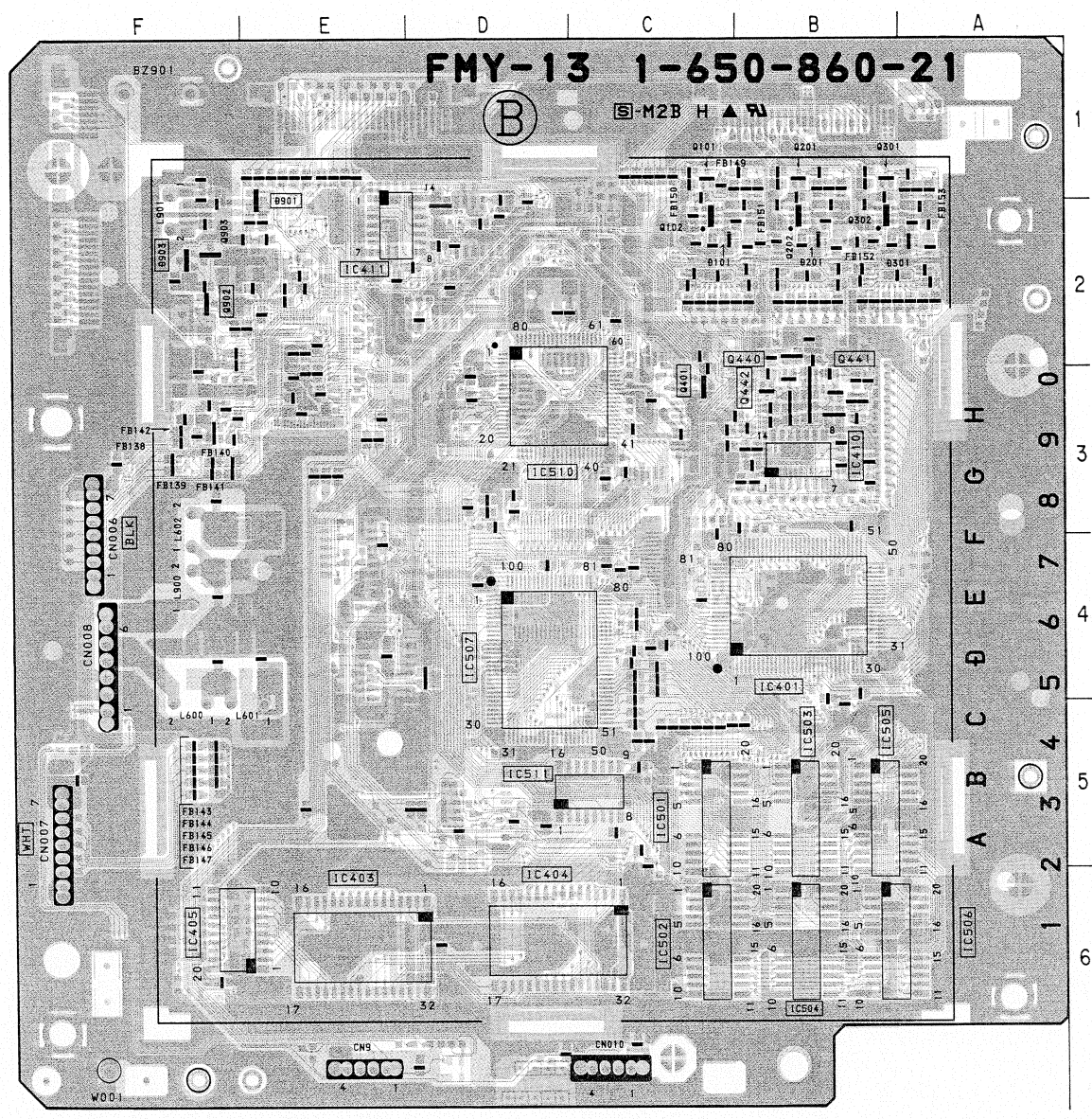


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3 -COMPONENT SIDE-
21



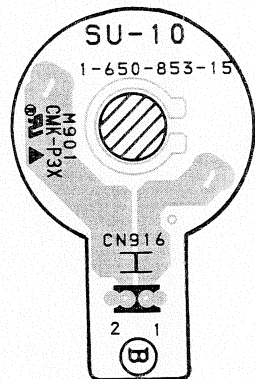
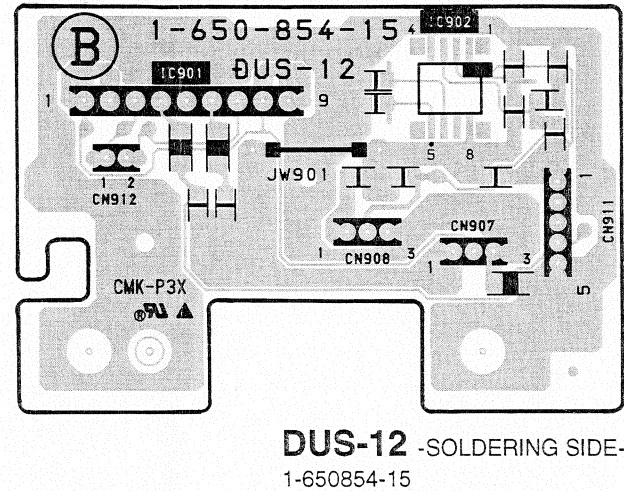
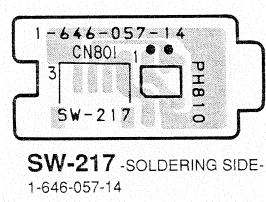
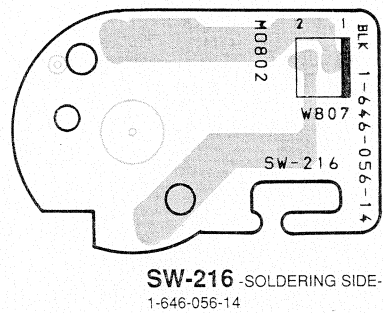
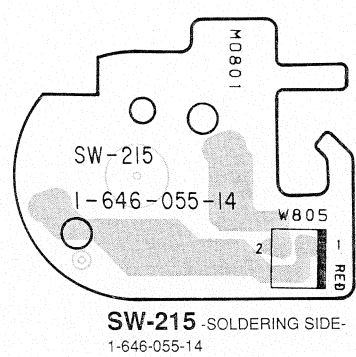
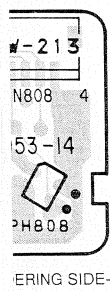
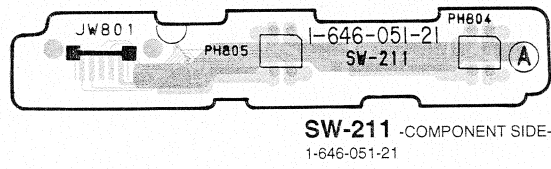
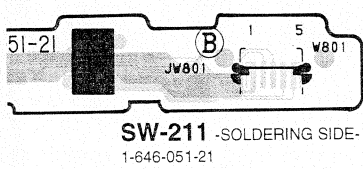
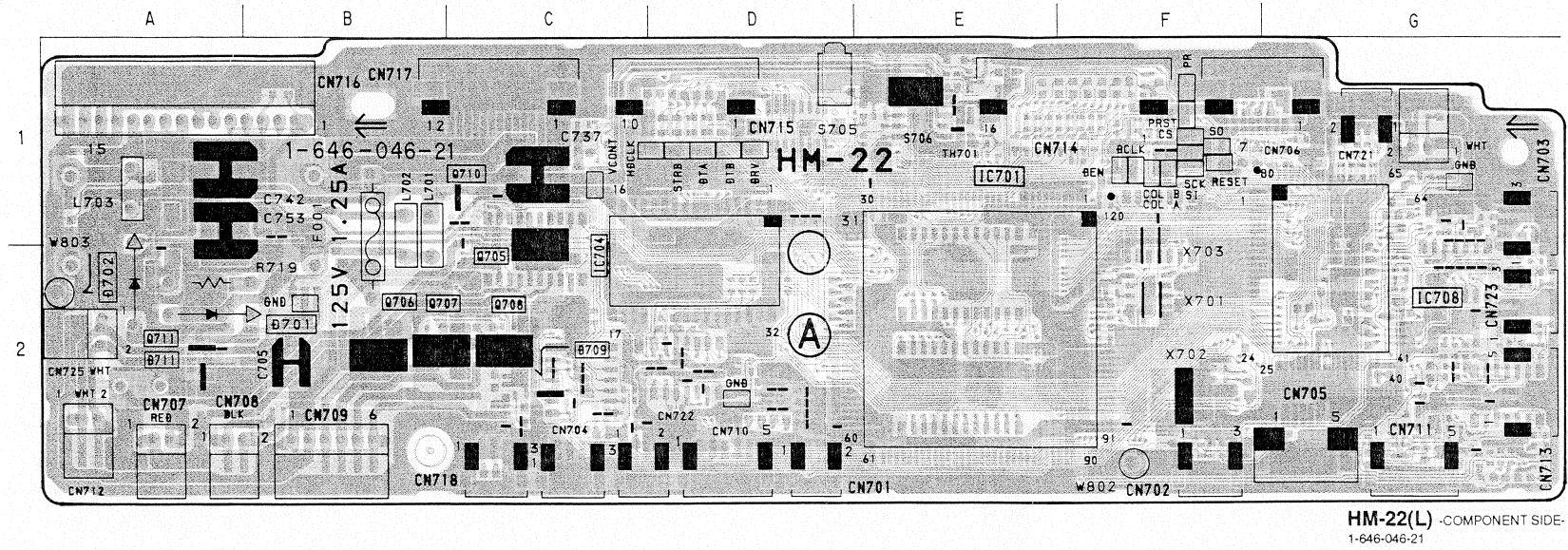
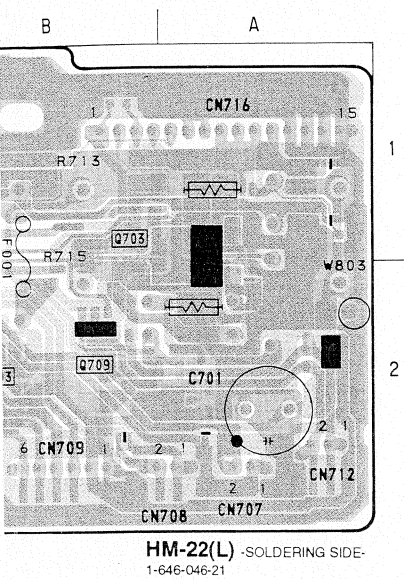
FMY-13 -SOLDERING SIDE-
1-650-860-21

FMY-13 BOARD

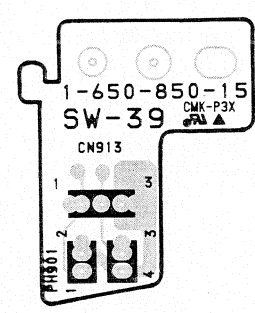
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D301	B-2 S
D901	E-1 S
D903	F-2 S
DL501	B-4
DL502	E-2
FL001	D-1
FL002	D-1
FL003	D-1
IC501	C-5 S
IC502	C-6 S
IC503	B-5 S
IC504	B-6 S
IC505	B-5 S
IC506	A-6 S
IC507	D-4 S
IC508	C-3 S
IC509	C-4 S
IC510	D-3 S
IC511	D-5 S
IC512	E-3 S
IC513	D-5 S
IC514	E-2 S
IC515	E-4 S
IC516	D-1 S
IC901	E-3 S
IC902	E-1 S
L600	F-5
L601	E-5
L602	F-3
L900	F-4
L901	F-2
Q101	C-1 S
Q102	C-2 S
Q201	B-1 S
Q202	B-2 S
Q301	B-1 S
Q302	B-2 S
Q401	C-3 S
Q801	F-2 S
Q902	F-2 S
X501	D-2
X901	F-2
XTL901	F-2
S:SOLDERING SIDE	

HM.

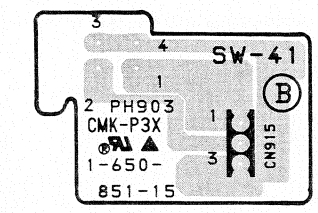
(EJECT MOTOR) SW-39 (PAPER TRAY SENSOR) SW-41 (PAPER OUT SENSOR) SW-42 (PAPER CHECK SENSOR) SW-208 (PAPER EDGE SENSOR) SW-210 (RIBBON CODE SENSOR)
 ROLLER POSITION SENSOR) SW-214 (RIBBON CASSETTE SWITCH) SW-215 (HEAD MOTOR) SW-216 (RIBBON MOTOR) SW-217 (JAMMING DET SENSOR)



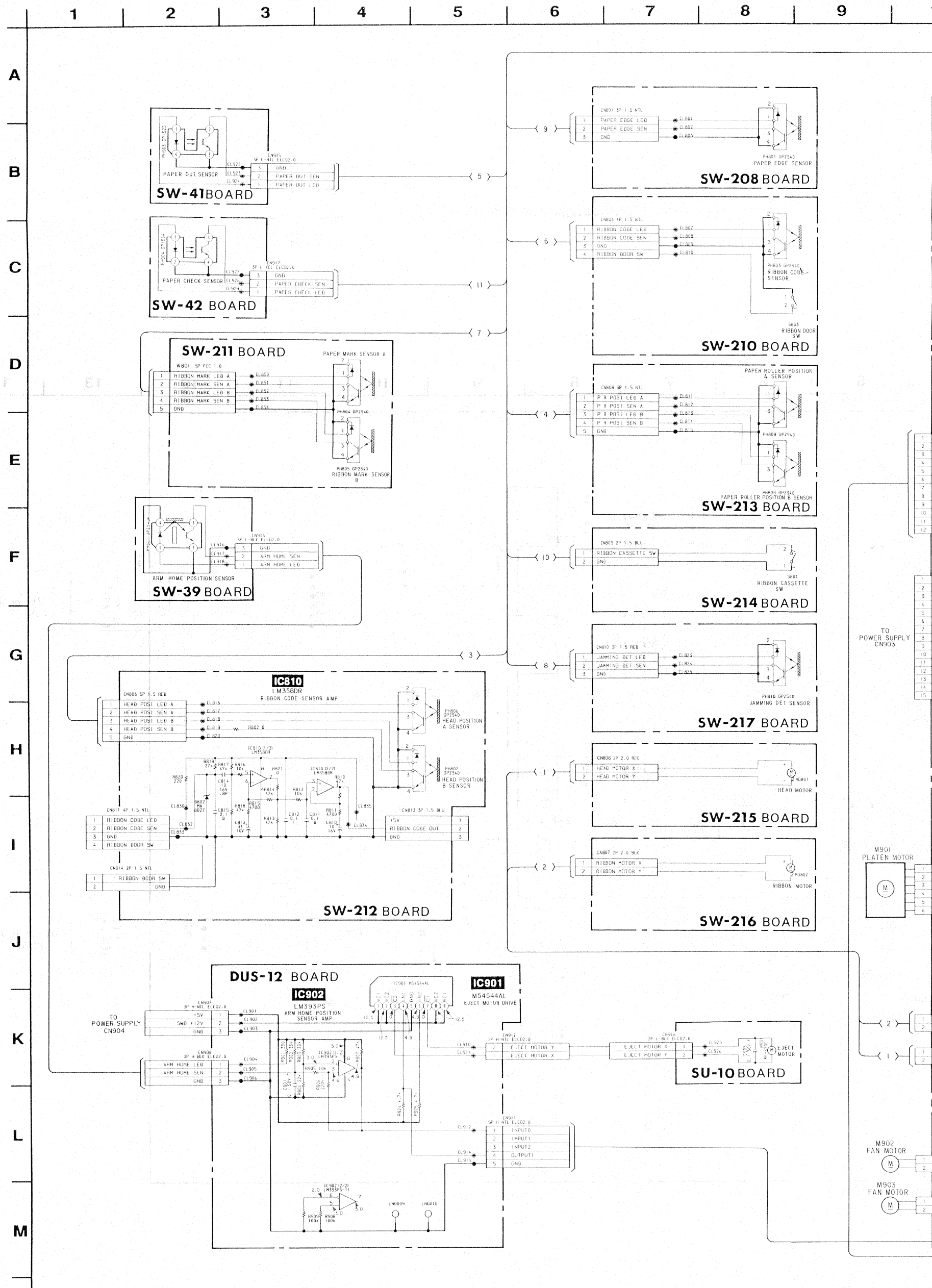
SU-10 -SOLDERING SIDE-
 1-650-853-15



SW-39 -SOLDERING SIDE-
 1-650-850-15

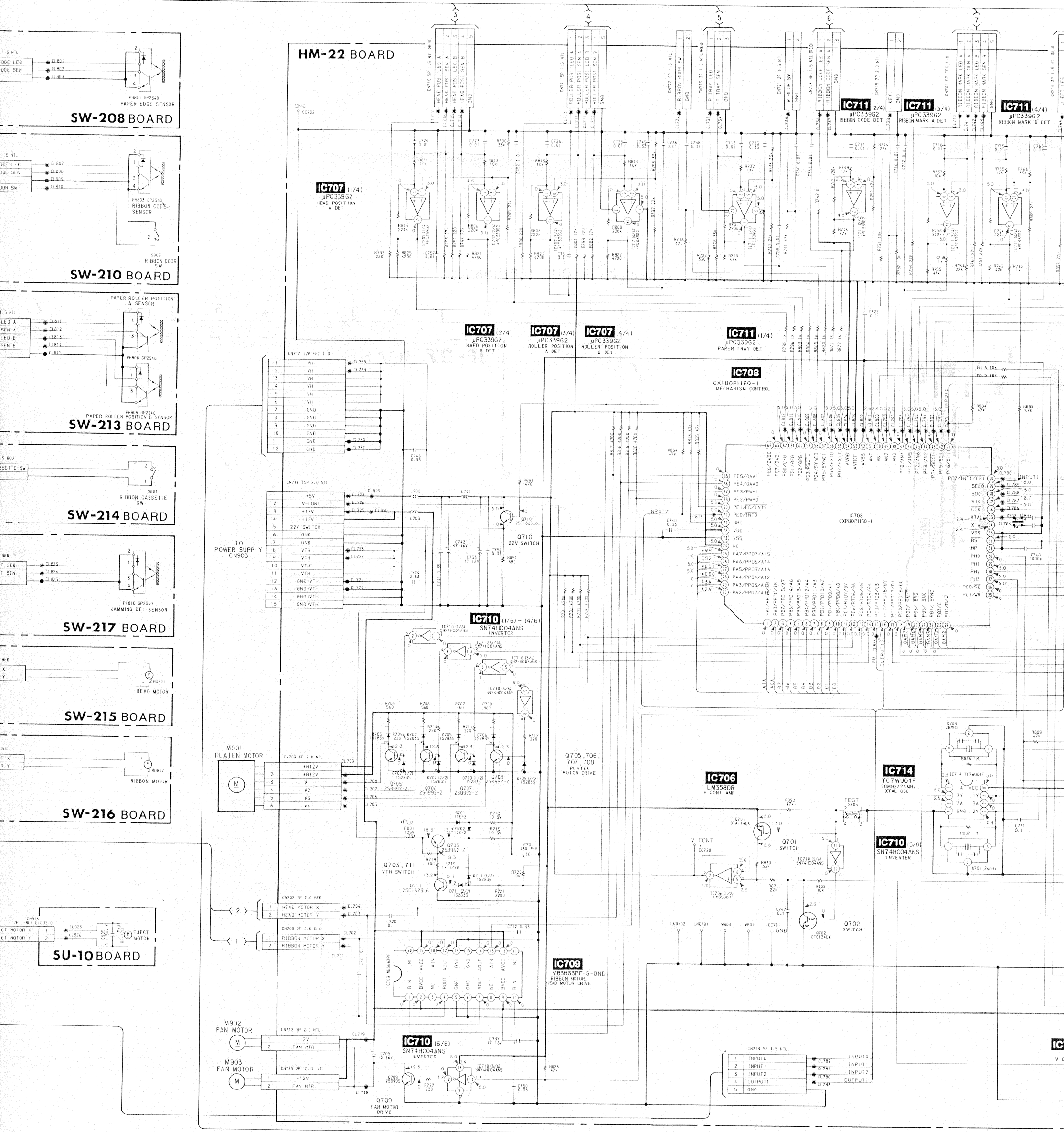


HM-22 (THERMAL HEAD CONTROL) DUS-12 (PAPER EJECT MOTOR CONTROL) SU-10 (EJECT MOTOR) SW-39 (PAPER
SW-212 (HEAD POSITION SENSOR) SW-213 (PAPER ROLLER POSITION SENSOR) SW-214 (RIBBON CASSETTE SWITCH)

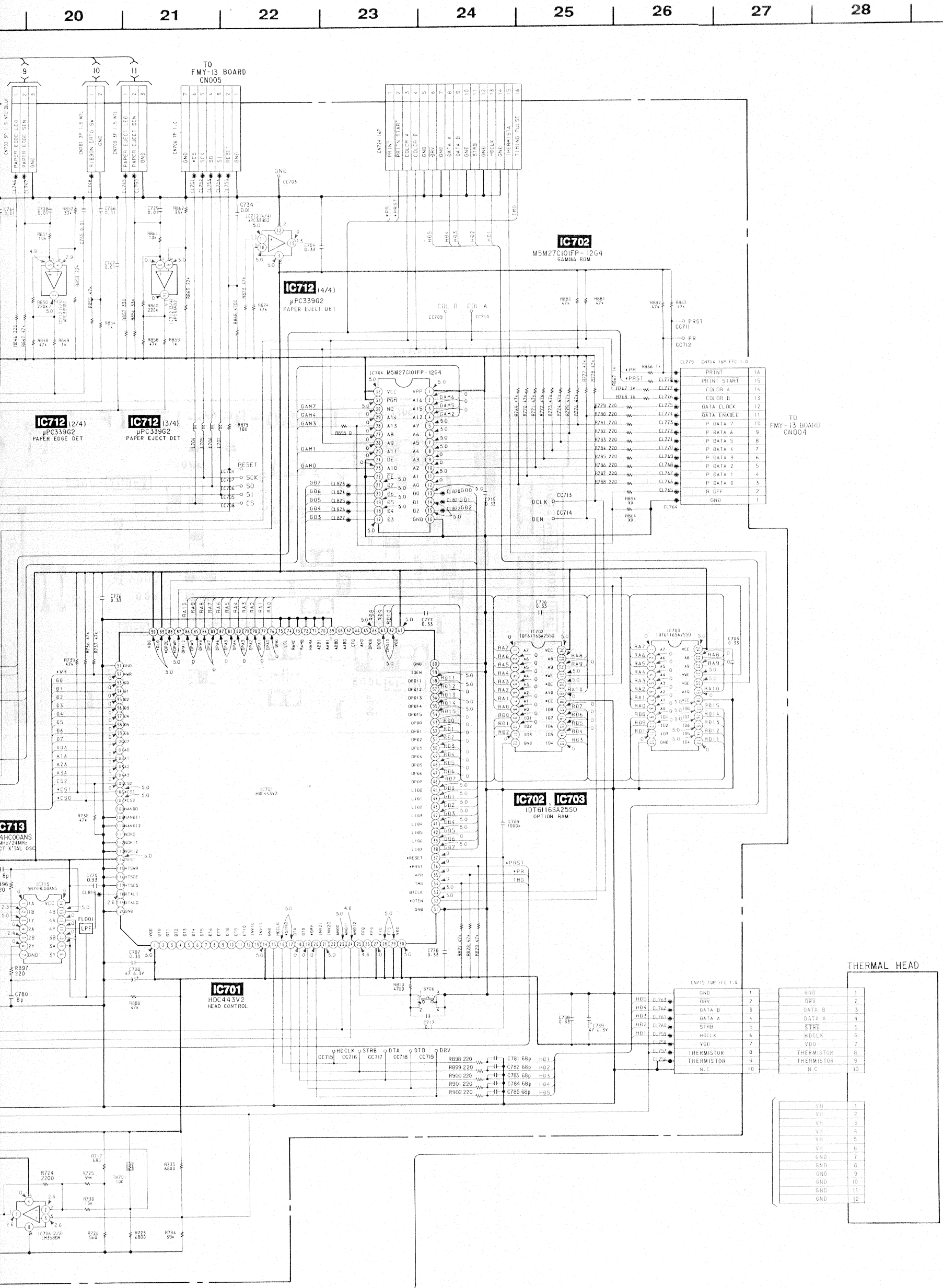


SU-10 (EJECT MOTOR) SW-39 (PAPER TRAY SENSOR) SW-41 (PAPER OUT SENSOR) SW-42 (PAPER CHECK SENSOR) SW-208 (PAPER EDGE
SW-214 (RIBBON CASSETTE SWITCH) SW-215 (HEAD MOTOR) SW-216 (RIBBON MOTOR) SW-217 (JAMMING DET SENSOR)

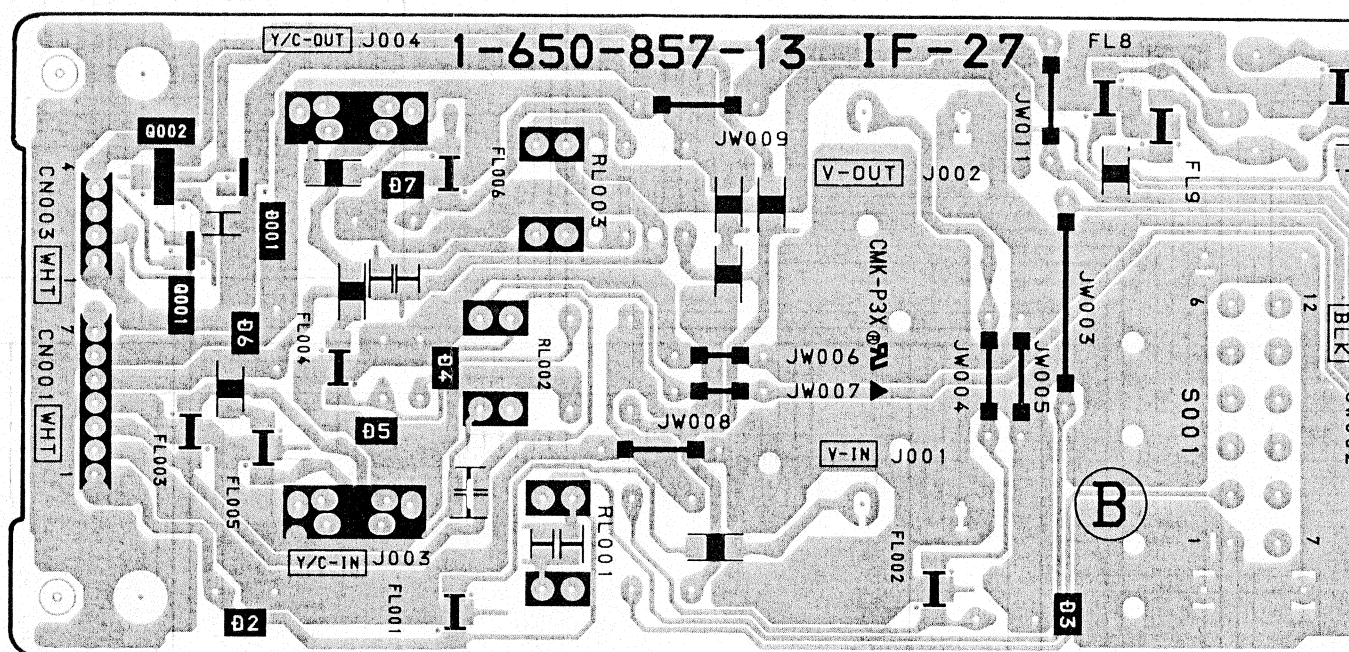
7 8 9 10 11 12 13 14 15 16 17 18



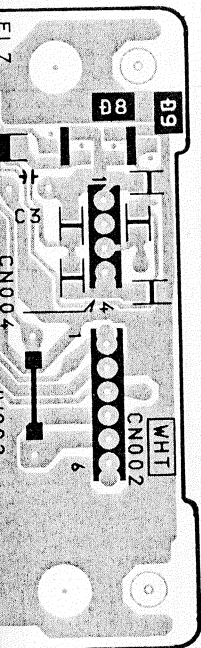
SW-210 (RIBBON CODE SENSOR) SW-211 (RIBBON MARK SENSOR)



IF-27 (IN/OUT TERMINAL)

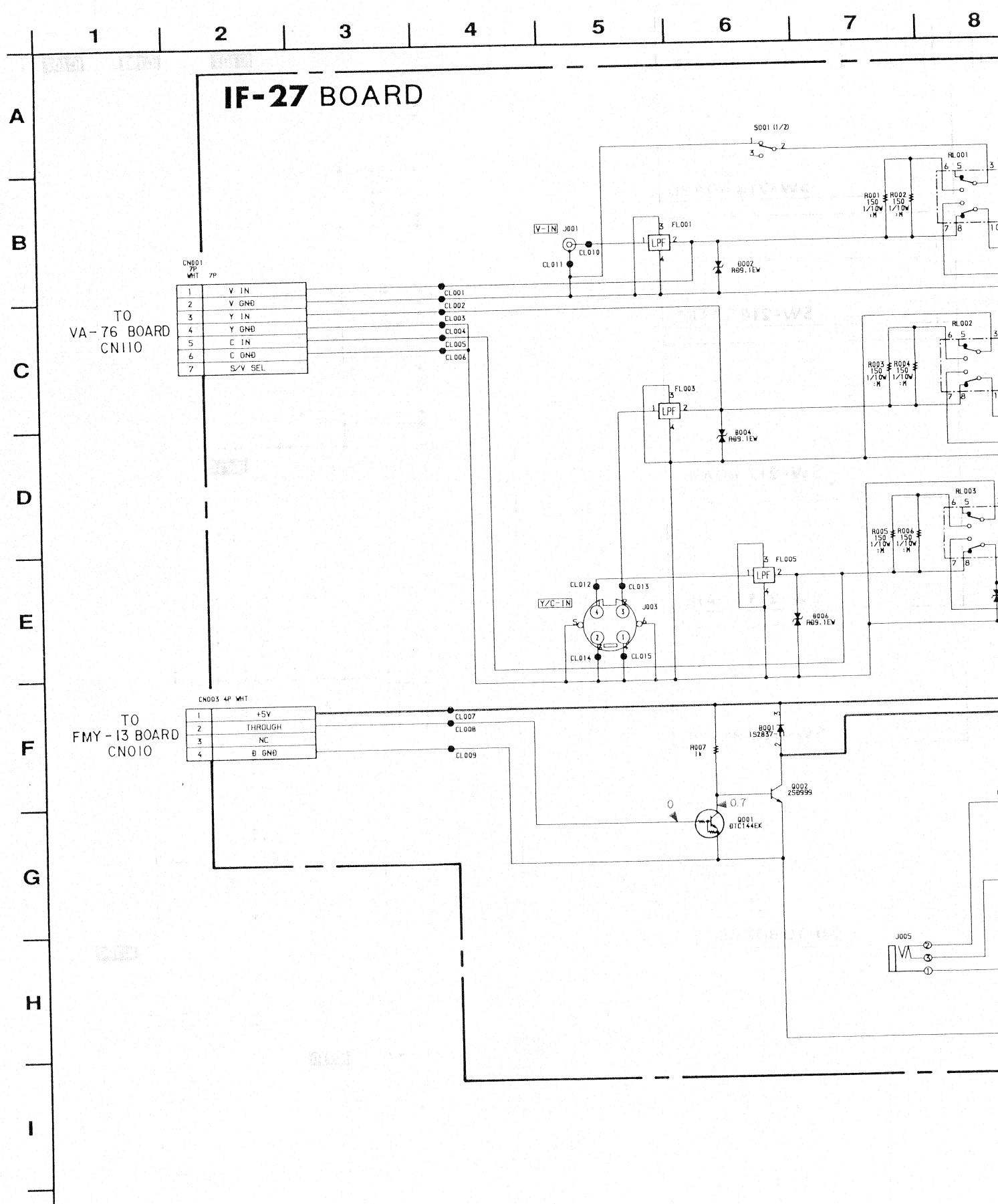


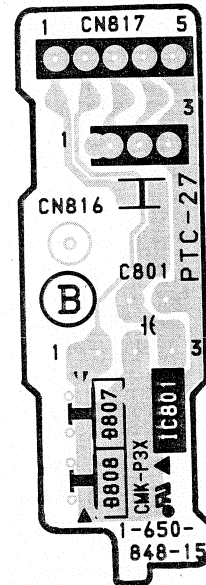
IF-27 -SO
1-650-857-13



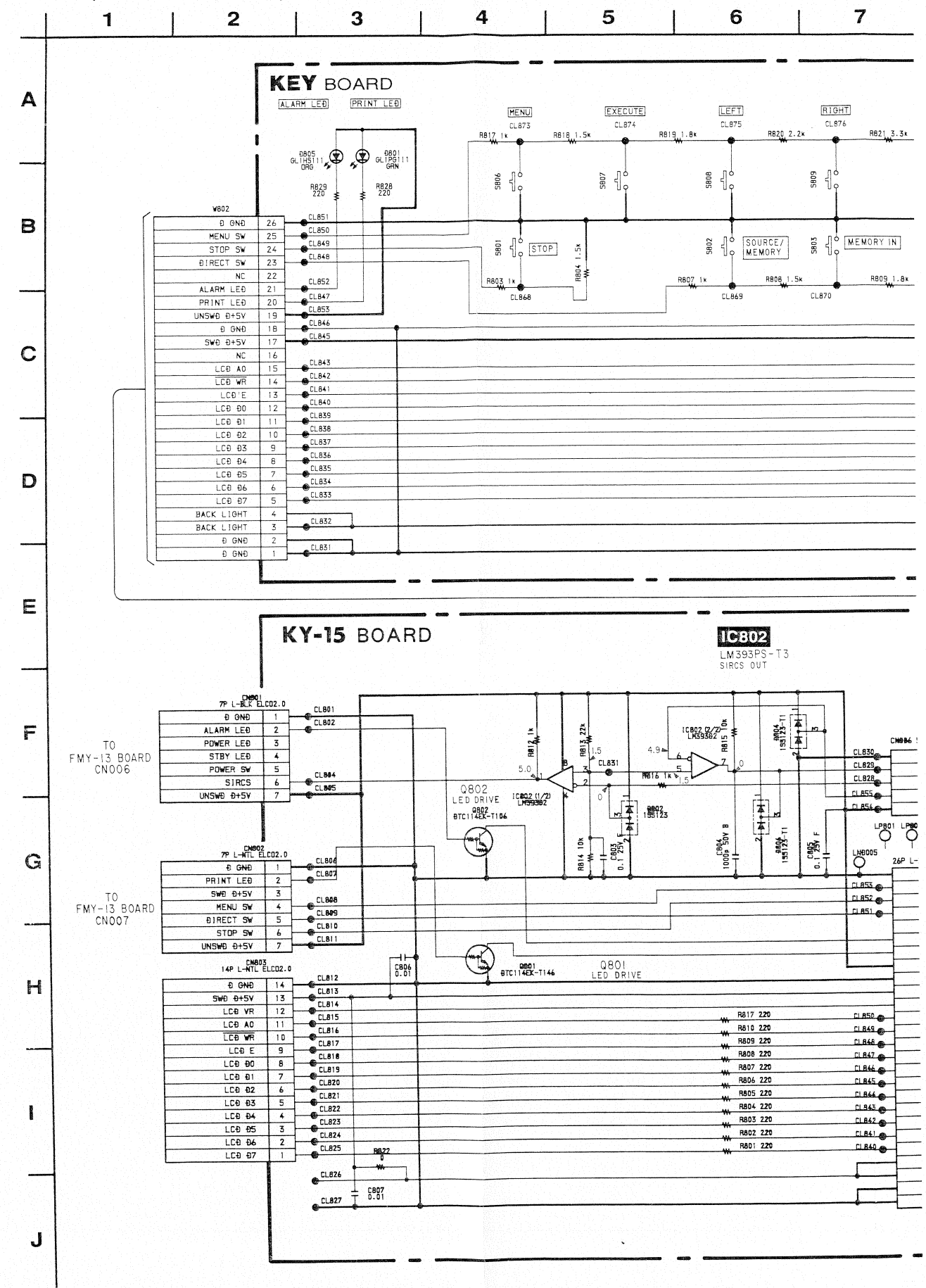
OLDERING SIDE-
3

IF-27 (IN/OUT TERMINAL)

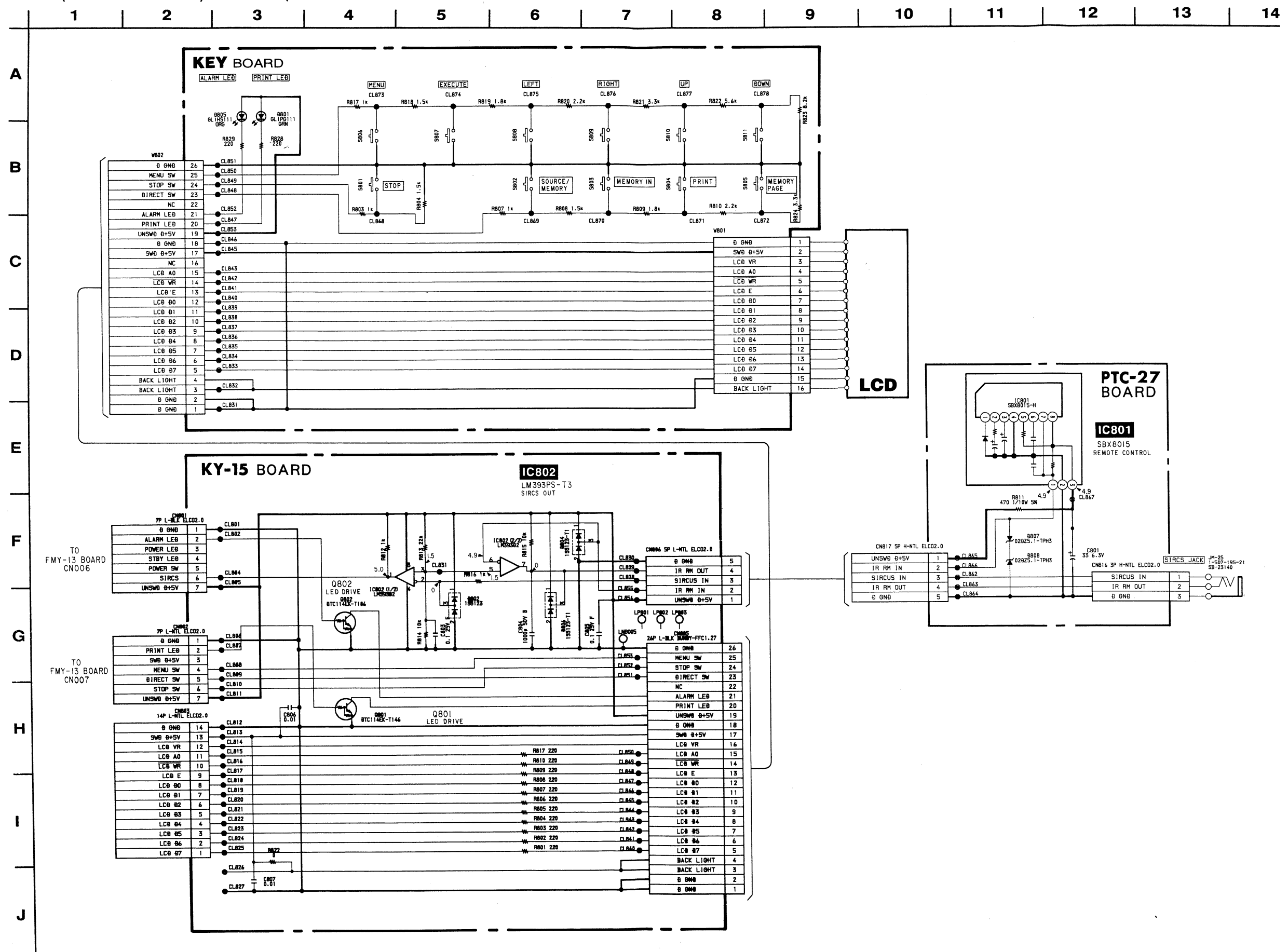




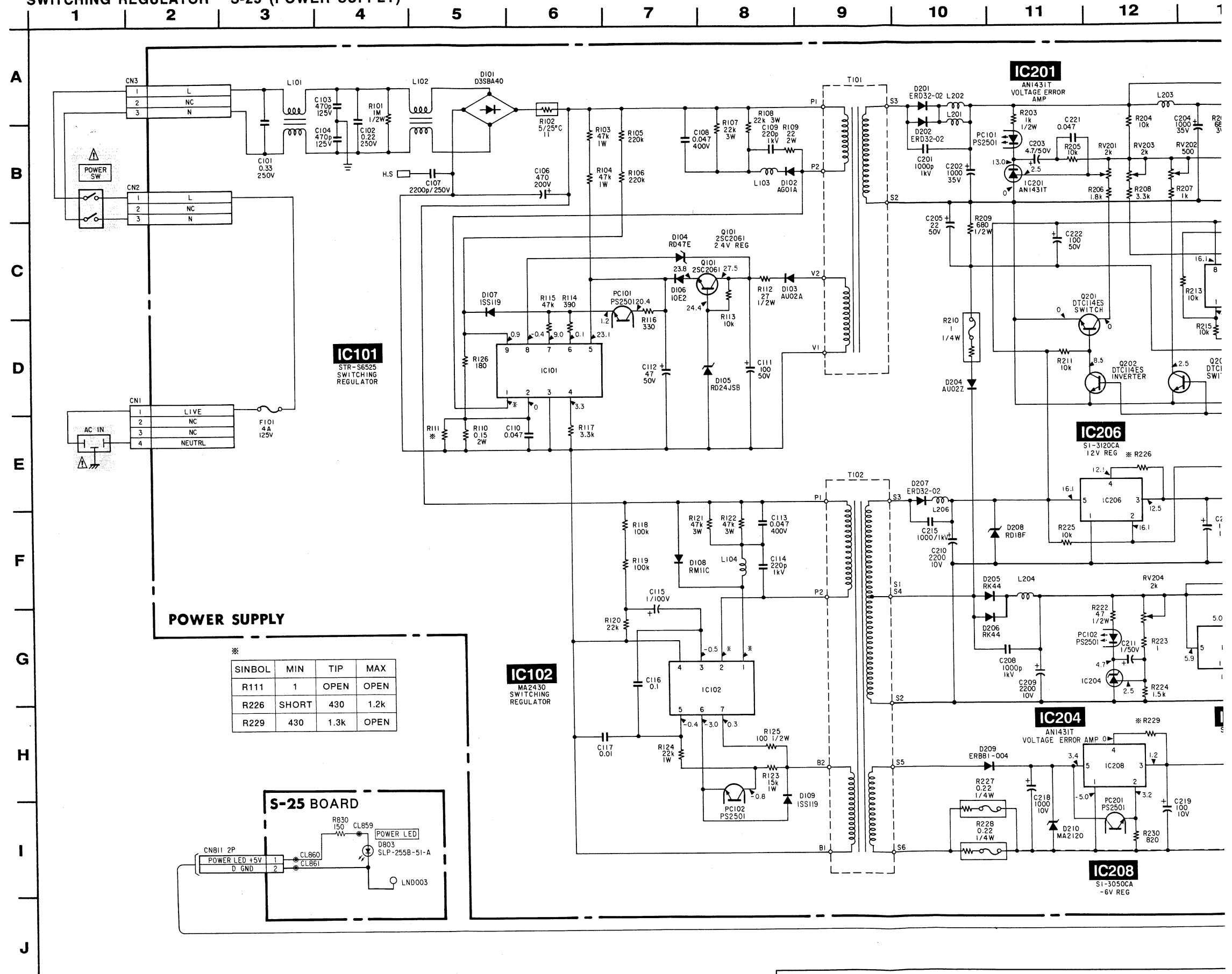
KY-15 -SOLDERING SIDE-
1-650-847-15

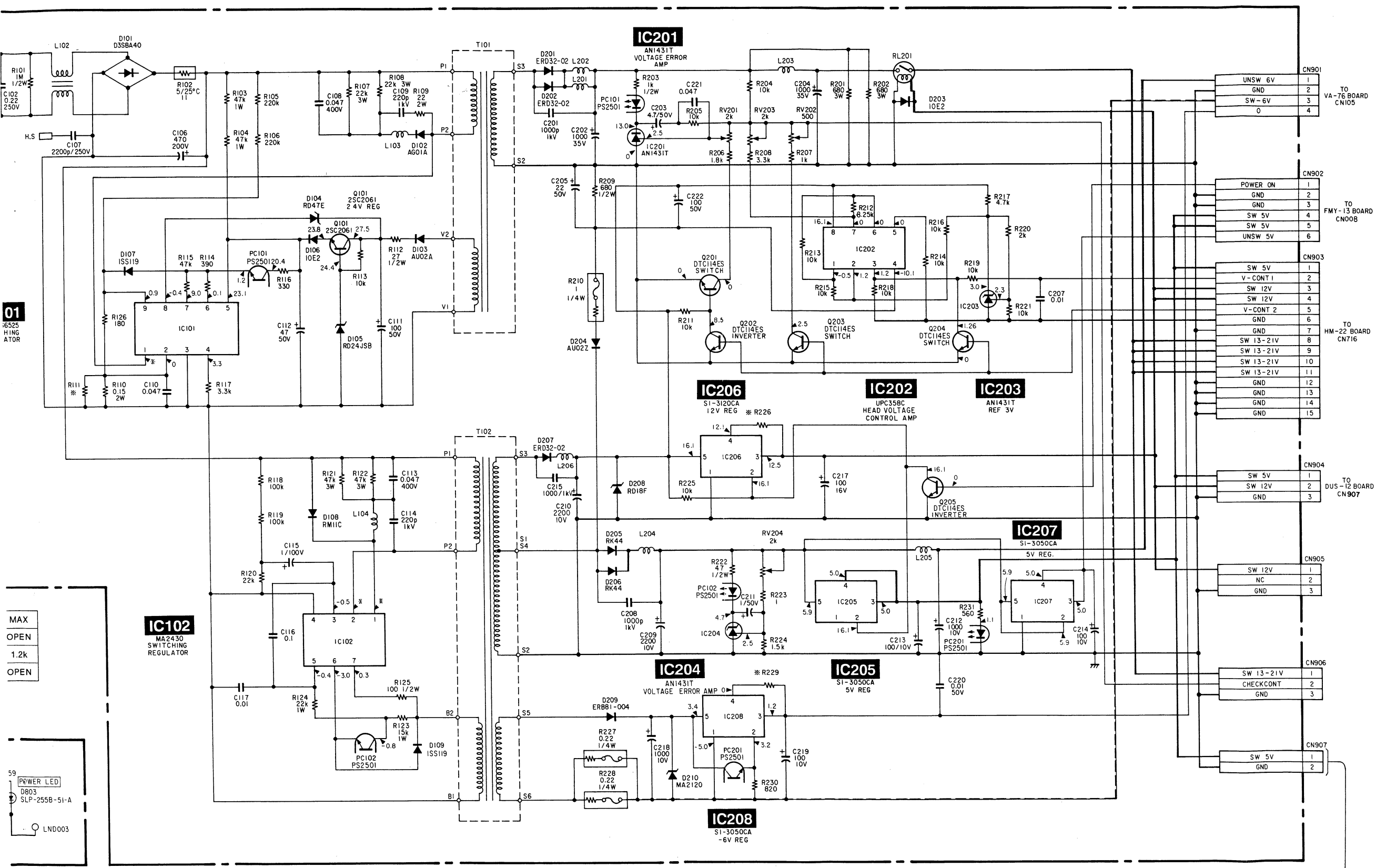


OLDERING SIDE-

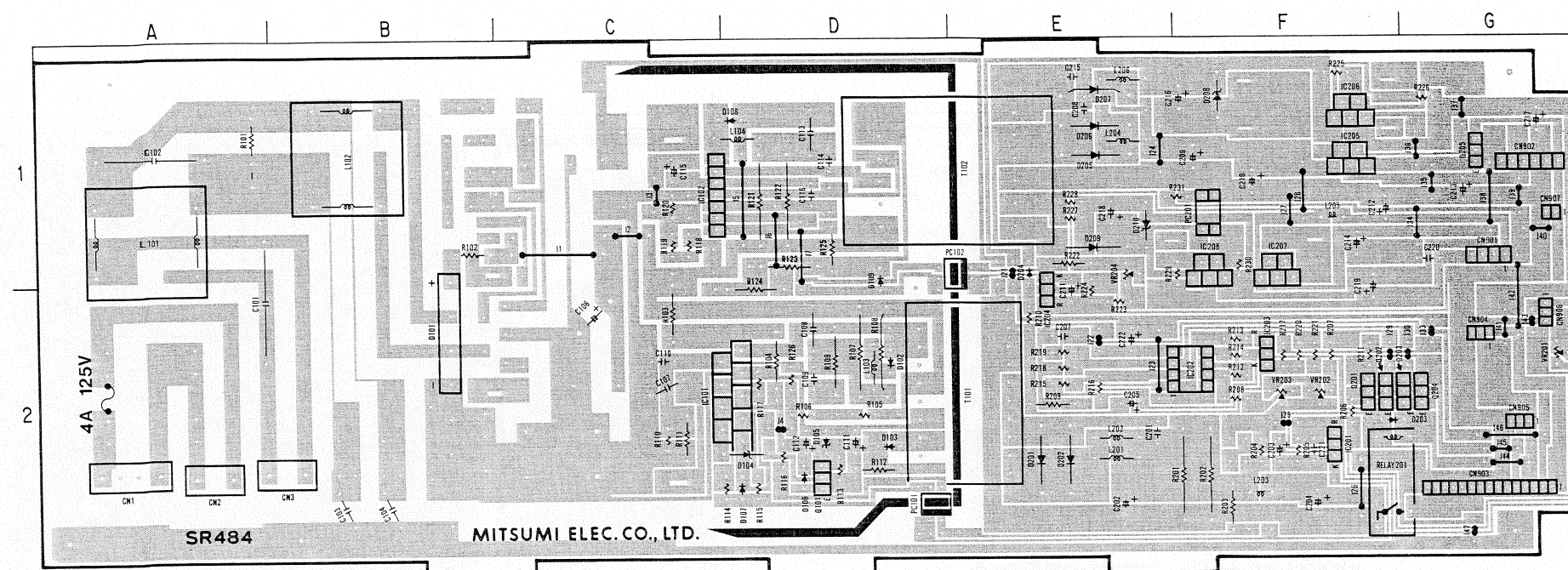


SWITCHING REGULATOR S-25 (POWER SUPPLY)





SWITCHING REGULATOR S-25 (POWER SUPPLY)

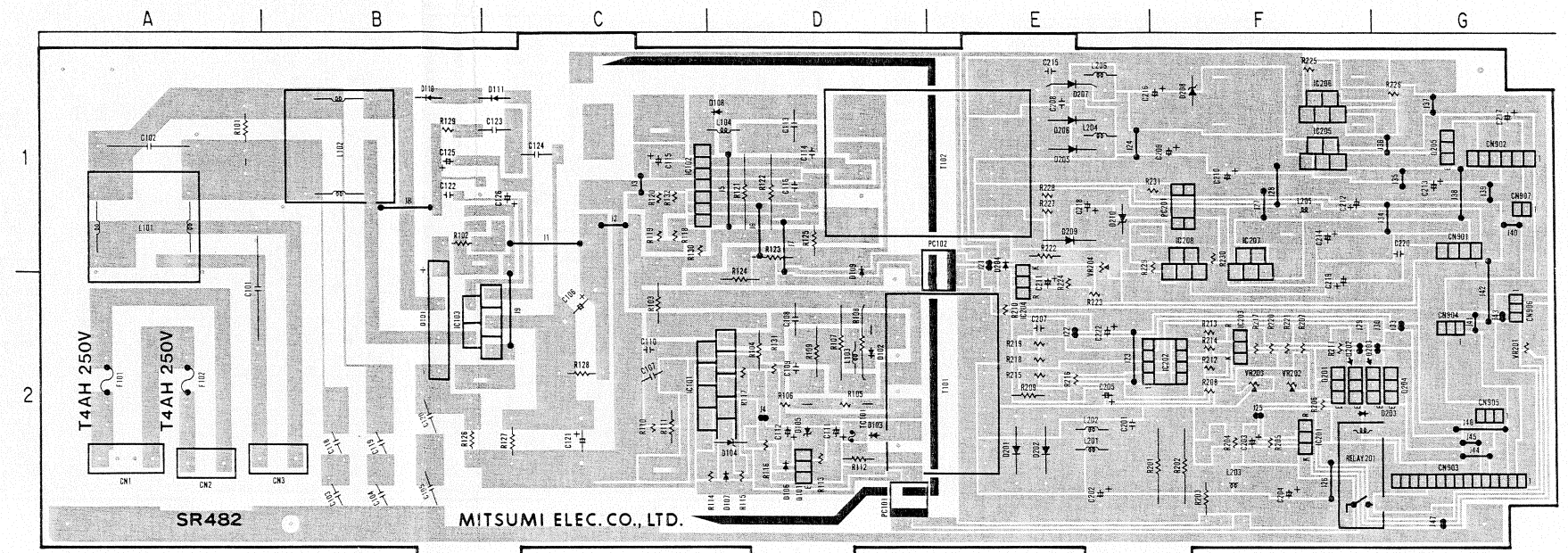


SWITCHING REGULATOR

CN1	A-2	L101	A-1
CN2	A-2	L102	B-1
CN3	B-2	L103	D-1
CN901	G-1	L104	D-1
CN902	G-1	L201	E-2
CN903	G-2	L202	E-2
CN904	G-2	L203	F-1
CN905	G-2	L204	E-1
CN906	G-2	L205	F-1
CN907	G-1	L206	E-1
D101	B-2	PC101	D-2
D102	D-2	PC102	E-1
D103	D-2	PC201	F-1
D104	D-2		
D105	D-2	Q101	D-2
D106	D-2	Q202	F-2
D107	D-2	Q202	F-2
D108	D-1	Q203	F-2
D109	D-1	Q204	G-2
D201	E-2	Q205	G-1
D202	E-2		
D203	F-2	RL201	F-2
D204	E-1		
D205	E-1	T101	E-2
D206	E-1	T102	E-1
D207	E-1		
D208	F-1	RV201	G-2
D209	E-1	RV202	F-1
D210	E-1	RV203	F-1
		RV204	E-1
F101			
IC101	C-2		
IC102	C-1		
IC201	F-2		
IC202	F-2		
IC203	F-2		
IC204	E-2		
IC205	F-1		
IC206	F-1		
IC207	F-1		
IC208	F-1		

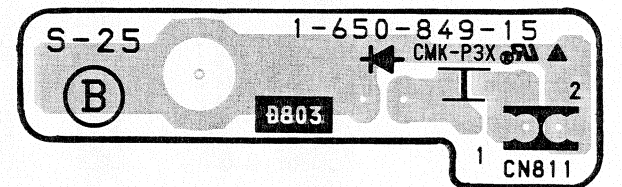
UP-1200AEP

SWITCHING REGULATOR S-25 (POWER SUPPLY)

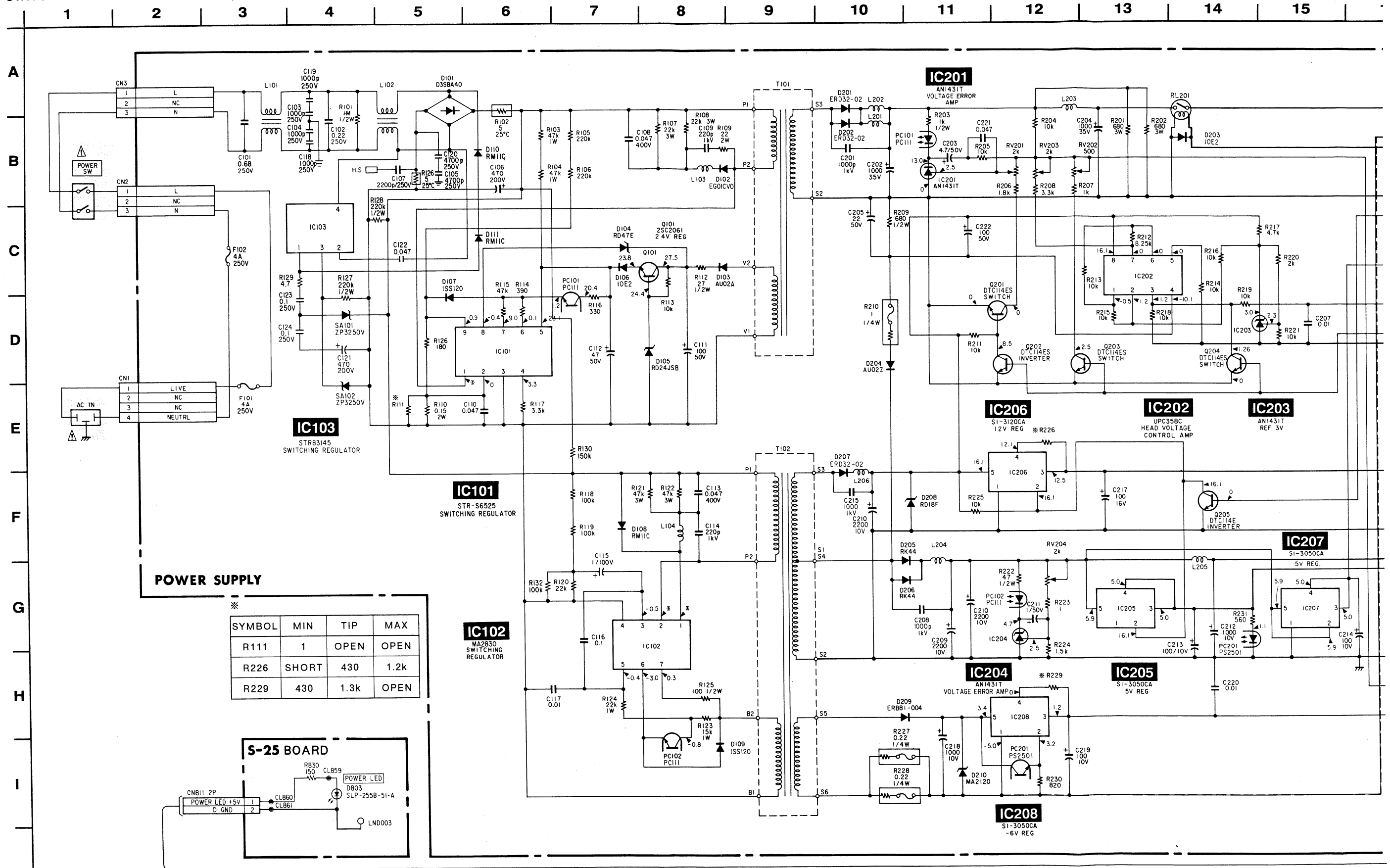


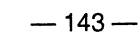
SWITCHING REGULATOR

CN1	A-2	L101	A-1
CN2	A-2	L102	B-1
CN3	B-2	L103	D-1
CN901	G-1	L104	D-1
CN902	G-1	L201	E-2
CN903	G-2	L202	E-2
CN904	G-2	L203	F-1
CN905	G-2	L204	E-1
CN906	G-2	L205	F-1
CN907	G-1	L206	E-1
D101	B-2	PC101	D-2
D102	D-2	PC102	E-1
D103	D-2	PC201	F-1
D104	D-2		
D105	D-2	Q101	D-2
D106	D-2	Q202	F-2
D107	D-2	Q202	F-2
D108	D-1	Q203	F-2
D109	D-1	Q204	G-2
D201	E-2	Q205	G-1
D202	F-2		
D203	F-2	RL201	F-2
D204	E-1		
D205	E-1	T101	E-2
D206	E-1	T102	E-1
D207	E-1		
D208	F-1	RV201	G-2
D209	E-1	RV202	F-1
D210	E-1	RV203	F-1
		RV204	E-1
F101			
IC101	C-2		
IC102	C-1		
IC201	F-2		
IC202	F-2		
IC203	F-2		
IC204	E-2		
IC205	F-1		
IC206	F-1		
IC207	F-1		
IC208	F-1		



S-25 - SOLDERING SIDE -
1-650-849-15





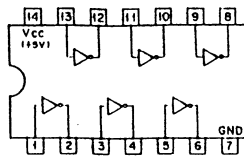
4-3. SEMICONDUCTORS

The chart in this section may sometimes show diodes, transistors, and ICs that are not interchangeable. When replacing a component, be sure to refer to the parts list. The circuit diagram of each IC is obtained from the IC data book published by the manufacturer.

TYPE	PAGE	TYPE	PAGE	TYPE	PAGE
02CZ2.0	162	74F08SJ	145	M5M27C101FP-UP12S-E2	155
1S2835	162	74F257ASJ	145	M5M27C101FP-UP18G-E2	155
1S2836	162	74F32SJ	145	M62352GP	156
1S2837	162	74F86SJ	145	MB3863PF-G-BND	156
1SS123	162	AK6420F	145	MB621948	156
1SS226	162	CXA1145M	146	MB89093PFV-G-124-BND	157
1SS300	162	CXA1211M	146	MC74HC4053F	157
1SS302	162	CXA1521M	146	MC74HC574AF	157
1T33C-01	162	CXA1585Q	146	NJM2230M	158
10E-2	162	CXD1159Q	147	NJM2233BM	158
2SA1618	162	CXD1176Q	148	NJM2234M	158
2SB962	162	CXD1178Q	148	NJM2240M	158
2SC1623	162	CXD1217Q	149	NJM2460M	158
2SC4207	162	CXD2023Q	150	NJM4560M	158
2SD992	162	CXD2024Q	150	PQ05SZ1U	158
2SD999-CLK	162	CXD8391Q	151	PQ05TZ1U	158
DTA114EK	162	CXD8444Q	151	RC4558PS	159
DTC114EK	162	CXL5505M	151	S-8054ALB-LM-S	159
DTC124EK	162	CXP80P116Q-1	152	SN74HC00ANS	159
DTC144EK	162	CXP80P116Q-1-236	152	SN74HC04ANS	159
GP1S23	162	CXP80P116Q-1-UP-1800E	152	SN74LS221NS	159
GP1S54	162	DS1000S-50	152	TC4W53F	159
GP2S40K	162	DS1000S-75	152	TC7W00F	159
MA152WK	162	HDC443V2	152	TC7W02F	159
MA8027-L	162	HD6475328F-FMY10-01	153	TC7WU04F	160
MSA1586	162	HD6475368F-FMY13-01	152	TL082CPS	160
MSC4116	162	HM51L240AS7	154	TL431CM	160
RD9.1EW	162	HM514400AS7GS-EL	154	UPC319G2	160
RN1302-TE85L	162	IDT6116SA25S0	154	UPC339G2	160
SBX8015-H	162	LM358D	154	UPD65006GF-250-3B8	160
SLP-255B	162	LM324D	155	UPD65013GF-407-3BA	161
XN2401	163	M50555-218FP	155		
XN4501	163	M54544AL	155		
XN4601	163	M5M27C101FP-UP12G-E2	155		
74F04SJ	145	M5M27C101FP-UP12M-E2	155		

74F04SJ (NS) FLAT PACKAGE

TTL INVERTER
- TOP VIEW -

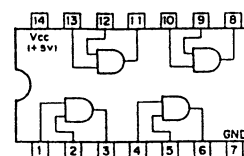


A	Y
0	1
1	0

0: LOW LEVEL
1: HIGH LEVEL

74F08SJ (NS) FLAT PACKAGE

TTL 2-INPUT POSITIVE-AND GATE
- TOP VIEW -

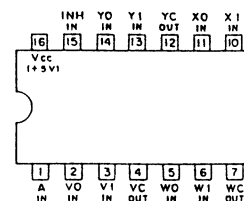


A	B	Y
0	0	0
0	1	0
1	0	0
1	1	1

0: LOW LEVEL
1: HIGH LEVEL

74F257ASJ (NS) FLAT PACKAGE

TTL 2-LINE-TO-1-LINE DATA SELECTOR/MULTIPLEXER
- TOP VIEW -

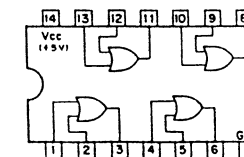


CONT. IN	ON	CHANNEL
INH	A	0
0	0	0
1	1	1
1	X	OPEN

0: LOW LEVEL
1: HIGH LEVEL
X: DON'T CARE

74F32SJ (NS) FLAT PACKAGE

TTL 2-INPUT POSITIVE-OR GATE
- TOP VIEW -

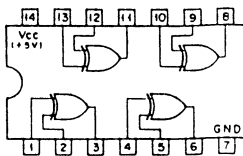


A	B	Y
0	0	0
0	1	1
1	0	1
1	1	1

0: LOW LEVEL
1: HIGH LEVEL

74F86SJ (NS) FLAT PACKAGE

TTL EXCLUSIVE OR GATE
- TOP VIEW -

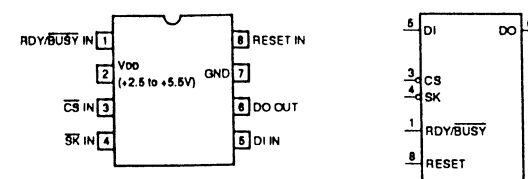


A	B	Y
0	0	0
0	1	1
1	0	1
1	1	0

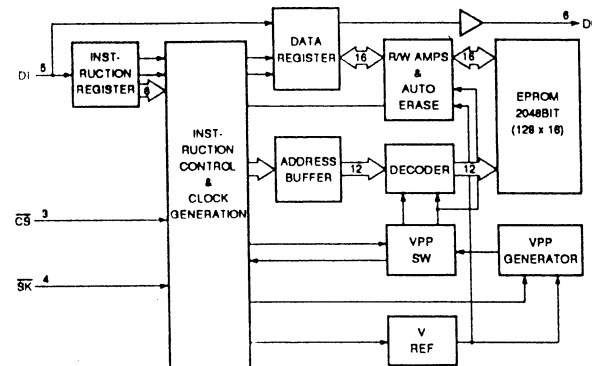
0: LOW LEVEL
1: HIGH LEVEL

AK6420F (ASAHIKASEI ELECT) FLAT PACKAGE

C-MOS 2048 (128 x 16) - BIT ERASABLE MEMORY
- TOP VIEW -

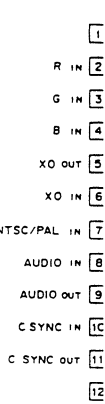


CS : CHIP SELECT INPUT
DI : SERIAL DATA INPUT
DO : SERIAL DATA OUTPUT
RDY/BUSY : READY / BUSY INPUT
RESET : RESET INPUT
SK : SERIAL DATA CLOCK INPUT

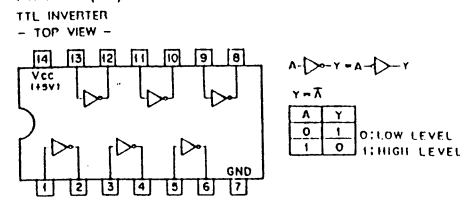


CXA1145M (S)

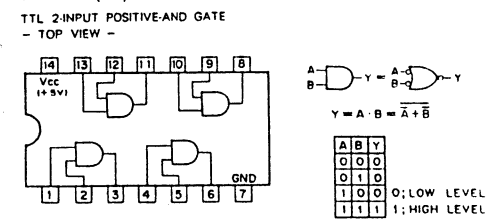
RGB COMPOSITE
- TOP VIEW -



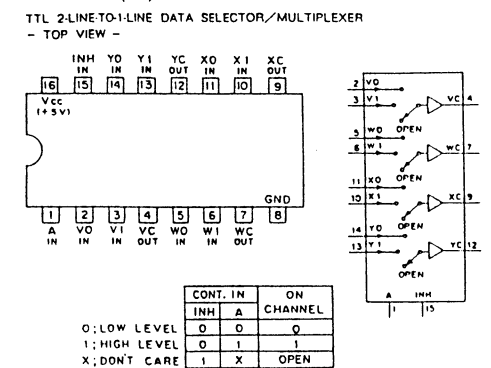
74F04SJ (NS) FLAT PACKAGE



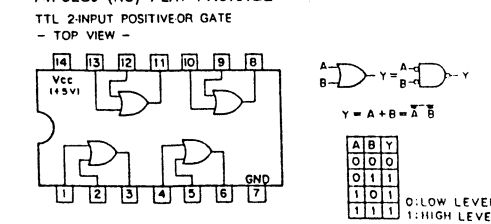
74F08SJ (NS) FLAT PACKAGE



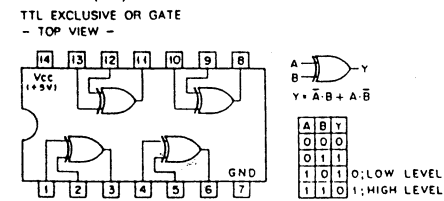
74F257ASJ (NS) FLAT PACKAGE



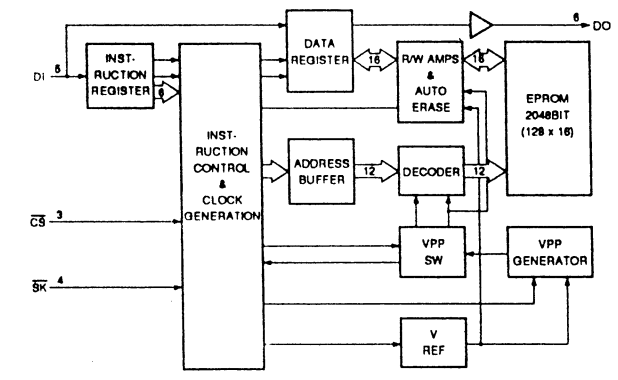
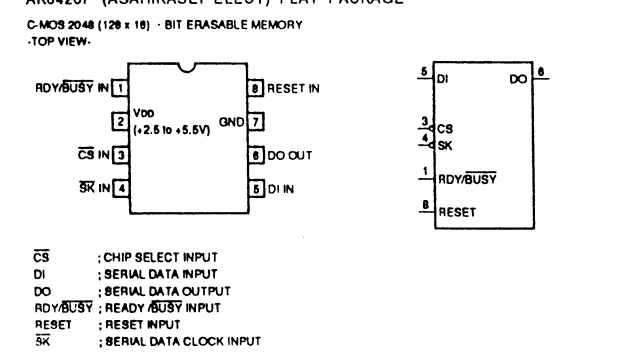
74F32SJ (NS) FLAT PACKAGE



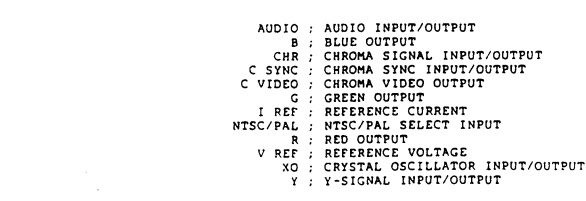
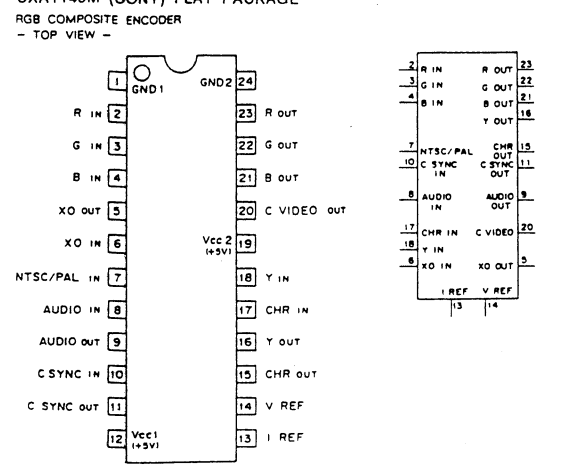
74F86SJ (NS) FLAT PACKAGE



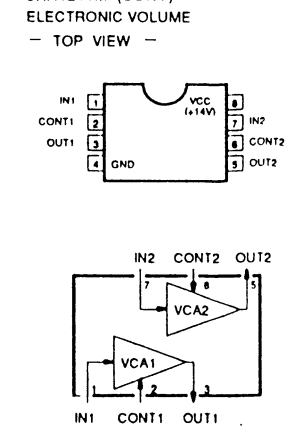
AK6420F (ASAHIKASEI ELECT) FLAT PACKAGE



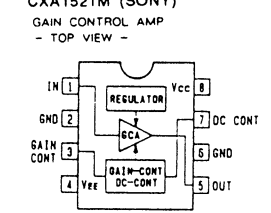
CXA1145M (SONY) FLAT PACKAGE



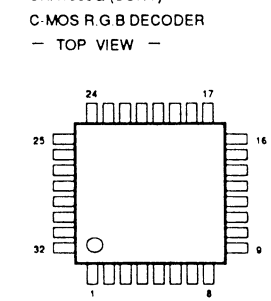
CXA1211M (SONY)



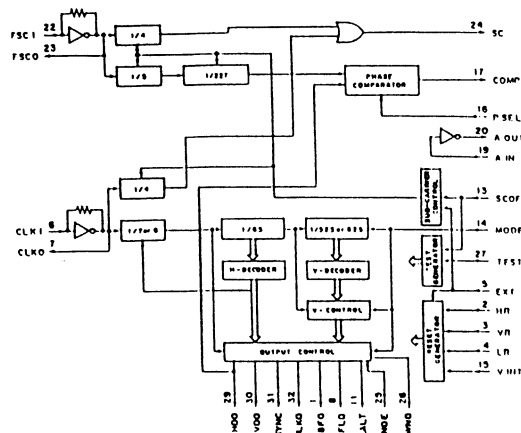
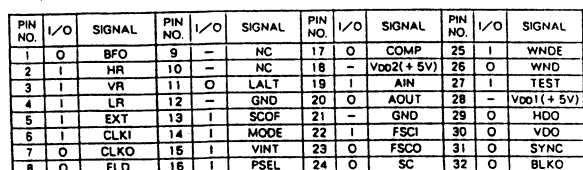
CXA1521M (SONY)



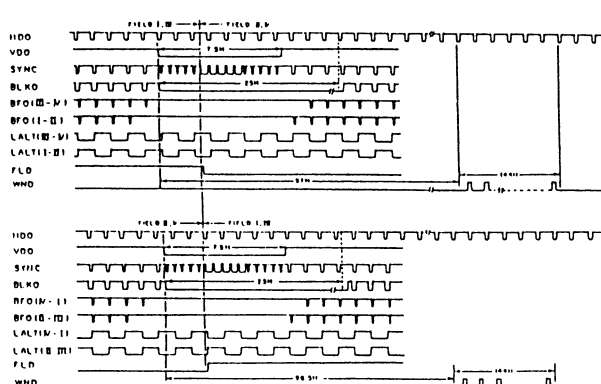
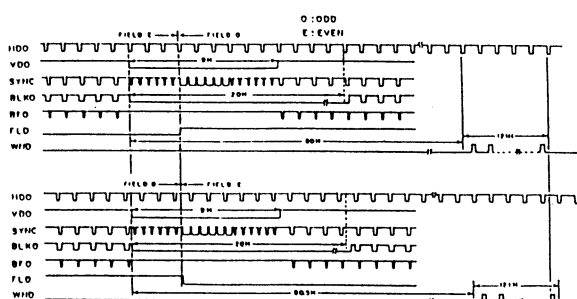
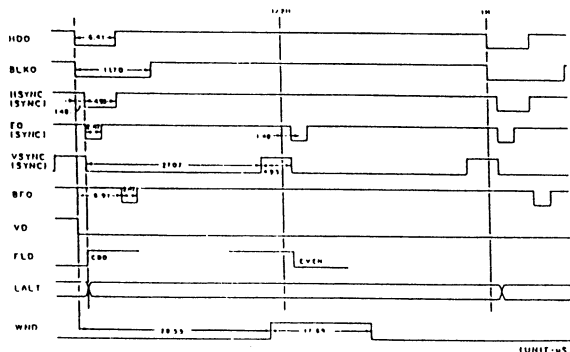
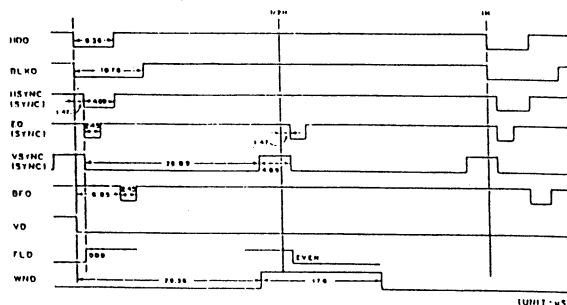
CXA1585Q (SONY)



C-MOS SYNC GENERATOR
- TOP VIEW -

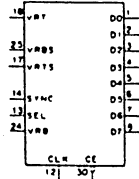
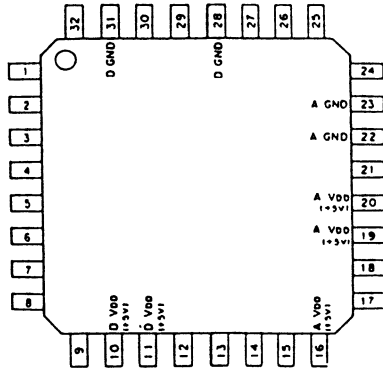


INPUT	OUTPUT
AIN : FILTER INVERTER INPUT	AOUT : FILTER INVERTER OUTPUT
CLKI : CLOCK INPUT	BFO : BURST FLAG PULSE
(NTSC : 14.31818MHz)	BLKO : COMPOSITE BLANKING PULSE
(PAL : 14.1875MHz)	CLKO : CLOCK OUTPUT
EXT : INT/EXT (L : INT)	CPHASE : PHASE COMP
FSC1 : 4FSK CLOCK INPUT	LD : FIELD PULSE
IIR : H RESET	FSCKO : 4FSK CLOCK OUTPUT
LIR : LALT RESET	HDDO : H DRIVE PULSE
MODE : NTSC/PAL (L : NTSC)	LALT : LINE ALTERNATE PULSE
PSEL : POLARITY SELECT FOR PHASE COMP	SC : SUBCARRIER
SCOF : SUBCARRIER OFF (L : OFF)	SYNCH : COMPOSITE SYNCH PULSE
TEST : TEST INPUT	V : DRIVE PULSE
WINT : INITIALIZE	WNO : WINDOW
VR : V RESET	
WNOE : WINDOW ENABLE	

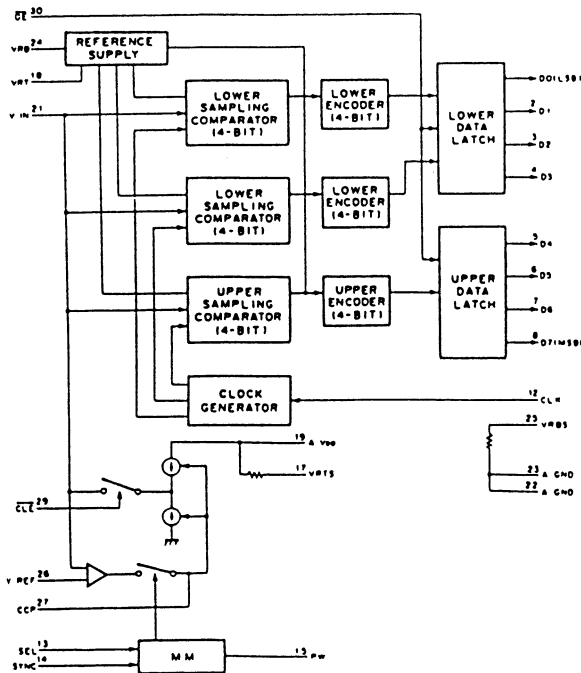


CXD1176Q (SONY)

C-MOS 8-BIT 20MSPS VIDEO A/D CONVERTER WITH CLAMP FUNCTION
- TOP VIEW -

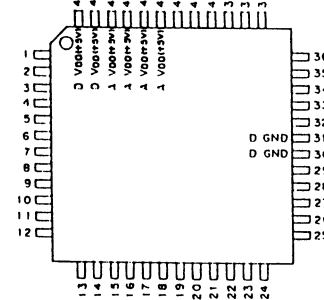


No.	I/O	SIGNAL	No.	I/O	SIGNAL	No.	I/O	SIGNAL	No.	I/O	SIGNAL
1	O	DO(LSB)	9	-	N.C.	17	O	VRTS	25	O	VRTS
2	O	D1	10	-	D VDD	18	O	VRT	26	I	VREF
3	O	D2	11	-	D VDD	19	-	A VDD	27	I/O	CCP
4	O	D3	12	I	CLK	20	-	A VDD	28	-	D GND
5	O	D4	13	I	SEL	21	I	V IN	29	I	CLE
6	O	D5	14	I	SYMC	22	-	A GND	30	O	OE
7	O	D6	15	I/O	PN	23	-	A GND	31	-	D GND
8	O	D7(MSB)	16	-	A VDD	24	O	VRS	32	-	N.C.

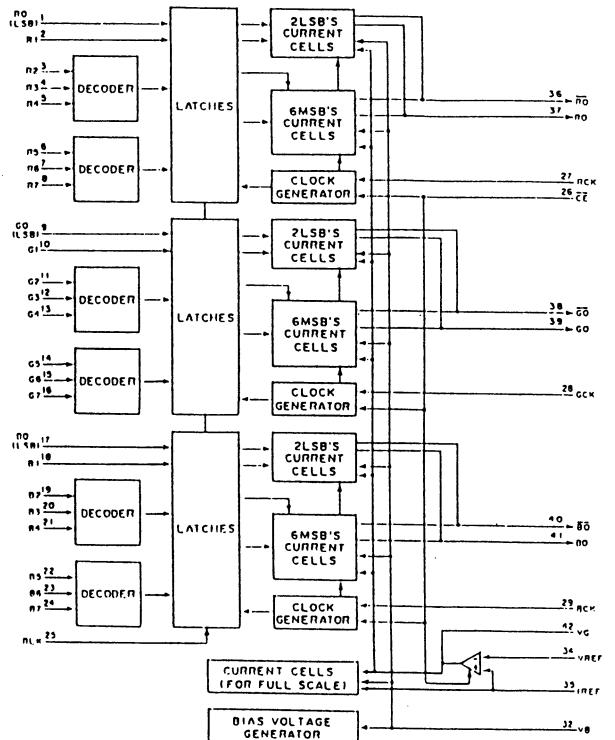
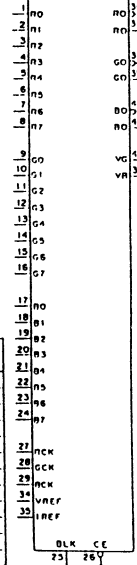


CXD1178Q (SONY) FLAT PACKAGE

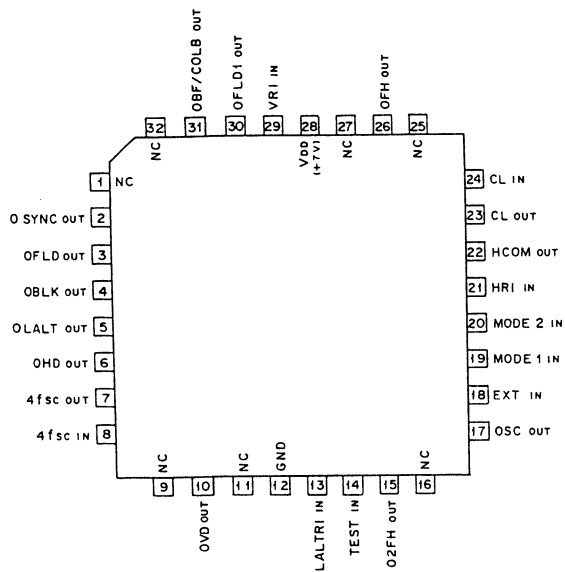
C-MOS 3CH 8-BIT 40MHz D/A CONVERTER
- TOP VIEW -



No.	I/O	SIGNAL	No.	I/O	SIGNAL	No.	I/O	SIGNAL	No.	I/O	SIGNAL
1	I	NO(LSB)	13	I	G4	25	I	BLK	37	O	RO
2	I	N1	14	I	G5	26	I	CE	38	O	GO
3	I	N2	15	I	G6	27	I	NCK	39	O	GO
4	I	N3	16	I	G7	28	I	GCK	40	O	BO
5	I	N4	17	I	BO(LSB)	29	I	BCK	41	O	BO
6	I	N5	18	I	B1	30	-	D GND	42	I	VG
7	I	N6	19	I	B2	31	-	D GND	43	-	A VDD
8	I	N7	20	I	B3	32	I	V8	44	-	A VDD
9	I	GO(LSB)	21	I	B4	33	-	A GND	45	-	A VDD
10	I	G1	22	I	B5	34	I	VREF	46	-	A VDD
11	I	G2	23	I	B6	35	I	IREF	47	-	A VDD
12	I	G3	24	I	B7	36	O	NO	48	-	A VDD



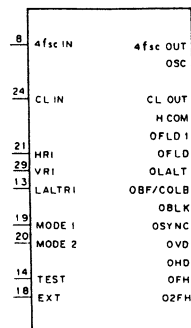
CXD1217Q (SONY) FLAT PACKAGE
C-MOS SYNC GENERATOR
- TOP VIEW -



SYSTEM	4fsc	CLOCK
NTSC	910fm	910fm
PAL	1135fm + 2fv	908fm
PALM	909fm	910fm
SECAM	—	908fm

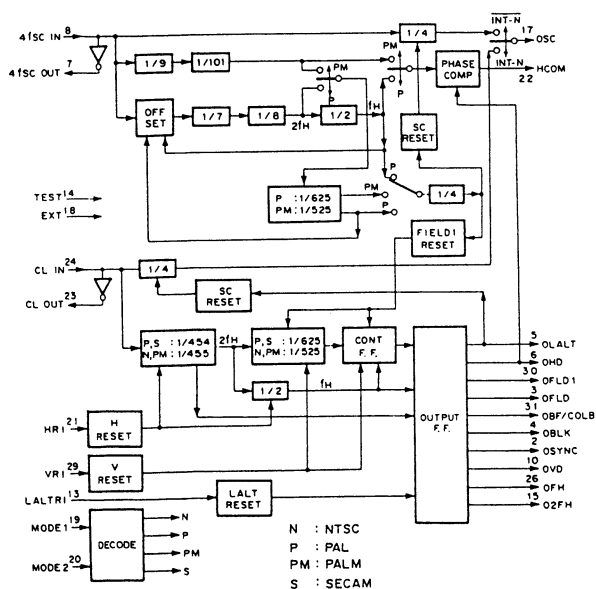
INPUT		SYSTEM
MODE1	MODE2	
0	0	NTSC
0	1	SECAM
1	0	PALM
1	1	PAL

0: LOW LEVEL
1: HIGH LEVEL



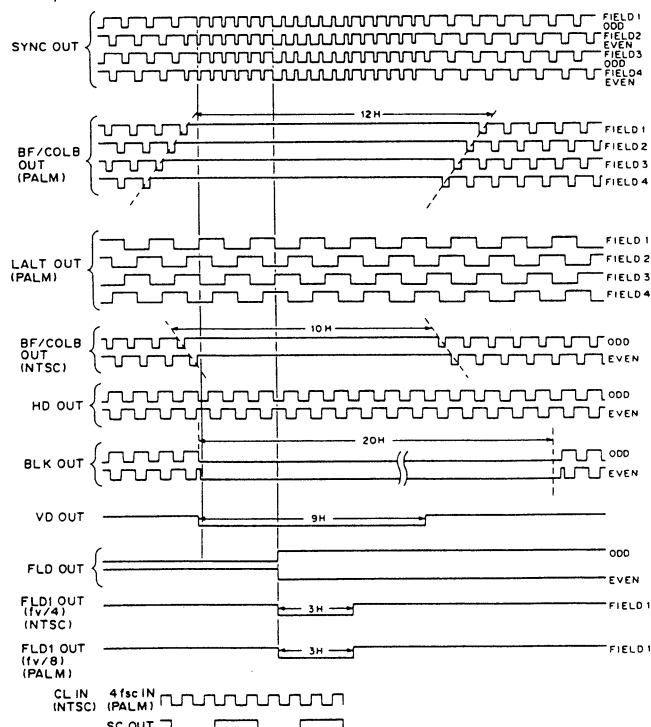
INPUT
4fsc IN : 4fsc
CL IN : CLOCK
EXT : SYNC MODE SELECT
(L: INTERNAL/H: EXTERNAL)
HRI : HORIZONTAL RESET
LALTRI : LINE ALTERNATE RESET
MODE1,2 : SYSTEM SELECT
VRI : VERTICAL RESET

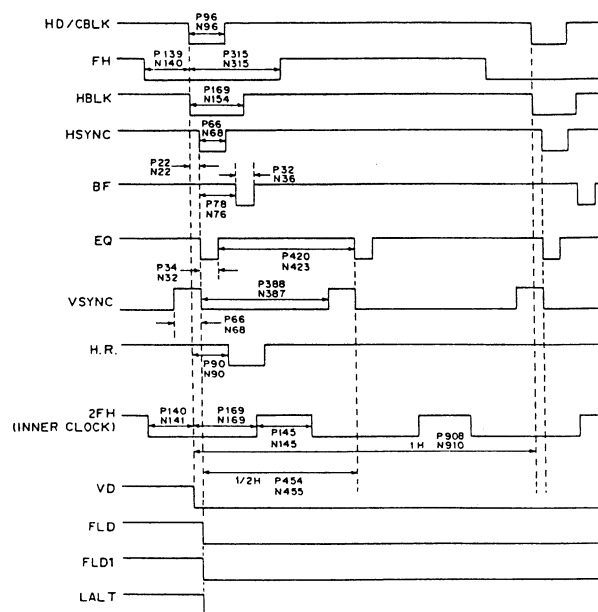
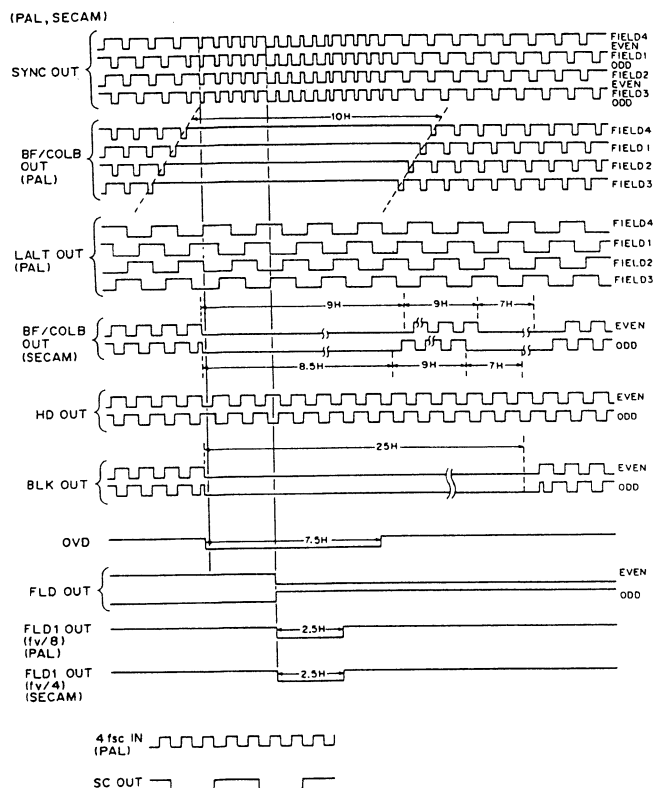
OUTPUT
4fsc OUT : 4fsc
CL OUT : CLOCK
HCOM : PHASE COMPARATOR
O2FH : 2fv
OBF/COLB : BURST FLAG/COLOR BLANKING
OBLK : COMPOSITE BLANKING
OHD : fh
OFLD : FIELD PULSE
OFLD1 : FIELD1
OHD : HORIZONTAL DRIVE
OLALT : LINE ALTERNATE
OSC : SUBCARRIER
OSYNC : COMPOSITE SYNC
OVD : VERTICAL DRIVE



N : NTSC
P : PAL
PM : PALM
S : SECAM

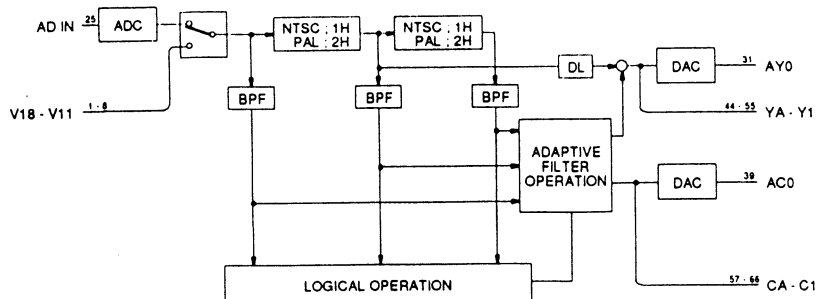
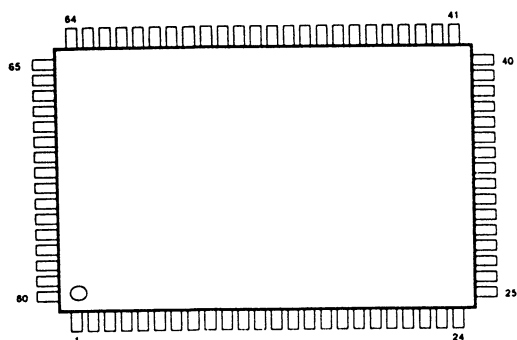
(NTSC, PALM)



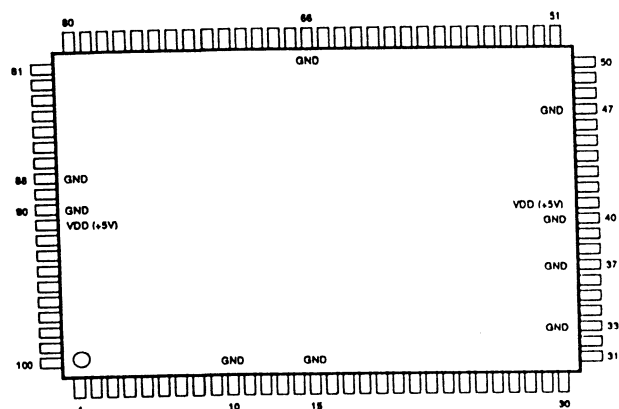


P: PAL, SECAM
N: NTSC, PALM

CXD2023Q (SONY)
CXD2024Q (SONY)
C-MOS DIGITAL COMB FILTER (NTSC/PAL)
— TOP VIEW —

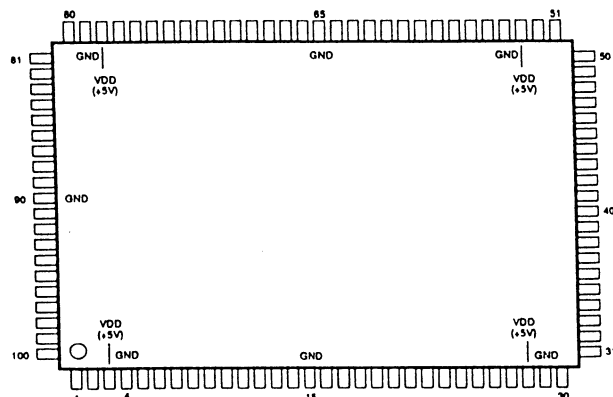


CXD8391Q (SONY)
C-MOS GATE ARRAY
— TOP VIEW —



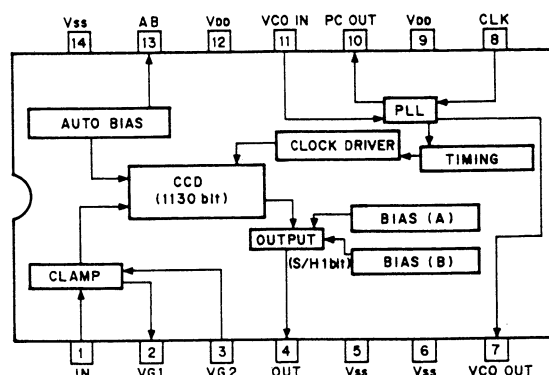
PIN No.	SIGNAL	PIN No.	SIGNAL	PIN No.	SIGNAL	PIN No.	SIGNAL
1	P47	26	P21	51	A20	76	D07
2	P46	27	P20	52	A19	77	D06
3	P45	28	P17	53	CS0	78	D05
4	P44	29	P16	54	CS1	79	D04
5	P43	30	P15	55	CS2	80	D03
6	P42	31	P14	56	A18	81	D02
7	P41	32	P13	57	A17	82	D01
8	P40	33	GND	58	A16	83	D00
9	WRP	34	RAS	59	A15	84	RES
10	GND	35	RC	60	A14	85	WR
11	P37	36	CAS	61	A13	86	DRQ2
12	P36	37	GND	62	A12	87	DRQ1
13	P35	38	DBRQ	63	A11	88	GND
14	P34	39	ABRQ	64	A10	89	CK
15	GND	40	GND	65	A09	90	GND
16	P33	41	VDD (+5V)	66	GND	91	VDD (+5V)
17	P32	42	PWR	67	A08	92	WRC
18	P31	43	BPWR	68	A07	93	P57
19	P30	44	P12	69	A06	94	P56
20	P27	45	P11	70	A05	95	P55
21	P26	46	P10	71	A04	96	P54
22	P25	47	GND	72	A03	97	P53
23	P24	48	A23	73	A02	98	P52
24	P23	49	A22	74	A01	99	P51
25	P22	50	A21	75	A00	100	P50

CXD8444Q (SONY)
C-MOS GATE ARRAY
— TOP VIEW —

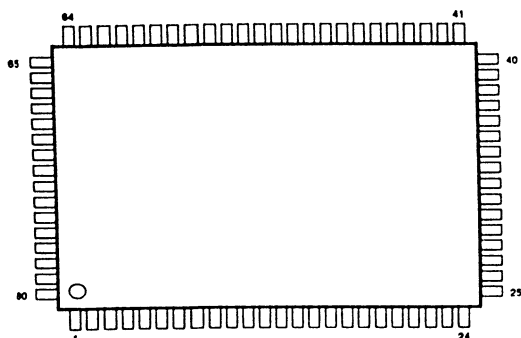


PIN No.	I/O	SIGNAL	PIN No.	I/O	SIGNAL	PIN No.	I/O	SIGNAL	PIN No.	I/O	SIGNAL
1	I	TRIM	26	O	RO2	51	O	BO2	76	I	ADON
2	I	CAPEN	27	O	RO3	52	O	BO3	77	O	ADOE
3	-	VDD (+5V)	28	-	VDD (+5V)	53	-	VDD (+5V)	78	-	VDD (+5V)
4	-	VSS	29	-	VSS	54	-	VSS	79	-	VSS
5	VO	DBUS7	30	O	RO4	55	O	BO4	80	I	CLR
6	VO	DBUS6	31	O	RO5	56	O	BO5	81	-	N.C
7	VO	DBUS5	32	O	RO6	57	O	BO6	82	VO	GBUS6
8	VO	DBUS4	33	O	RO7	58	O	BO7	83	VO	GBUS7
9	VO	DBUS3	34	I	Y3A	59	VO	BBUS0	84	VO	RBUS0
10	VO	DBUS2	35	I	Y3B	60	VO	BBUS1	85	VO	RBUS1
11	VO	DBUS1	36	O	GO0	61	VO	BBUS2	86	I	BOXW
12	VO	DBUS0	37	O	GO1	62	VO	BBUS3	87	I	CLKA
13	O	XWRPD	38	O	GO2	63	O	ACK	88	I	OE1
14	O	WRPD	39	O	GO3	64	O	SO	89	I	CLK
15	-	VSS	40	-	VSS	65	-	VSS	90	-	VSS
16	O	BLK	41	O	GO4	66	VO	BBUS4	91	O	STDCLK
17	I	STD	42	O	GO5	67	VO	BBUS5	92	I	OE2
18	I	CLKSEL	43	O	GO6	68	VO	BBUS6	93	I	CLKB
19	I	DAON	44	O	GO7	69	VO	BBUS7	94	I	OE3
20	I	WRP	45	I	SCK	70	VO	GBUS0	95	VO	RBUS2
21	I	COLA	46	I	VD	71	VO	GBUS1	96	VO	RBUS3
22	I	COLB	47	I	SI	72	VO	GBUS2	97	VO	RBUS4
23	I	POFF	48	I	CS	73	VO	GBUS3	98	VO	RBUS5
24	O	RO0	49	O	BO0	74	VO	GBUS4	99	VO	RBUS6
25	O	RO1	50	O	BO1	75	VO	GBUS5	100	VO	RBUS7

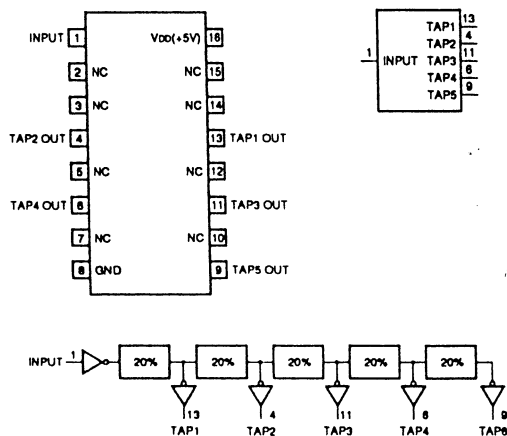
CXL5505M (SONY)
CMOS-CCD 1H DELAY LINE
— TOP VIEW —



CXP80P116Q-1
CXP80P116Q-1-236
CXP80P116Q-1-UP1800E
C-MOS 8-BIT MICRO PROCESSING UNIT
- TOP VIEW -

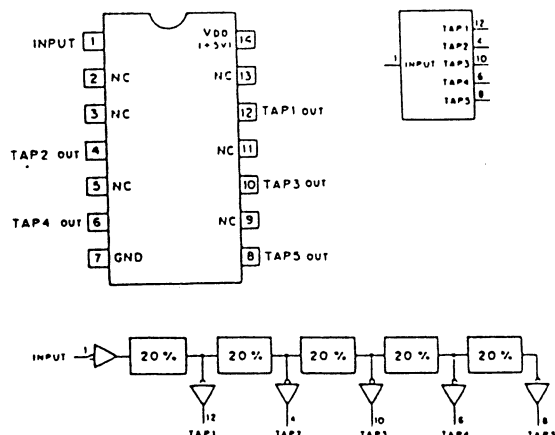


DS1000S-75 (DALLAS SEMICONDUCTOR)(DELAY TIME=75 nS)
C-MOS DELAY LINE
- TOP VIEW -



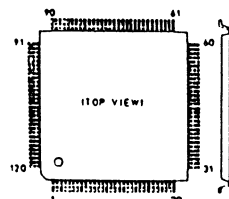
DELAY TIME (nS)				
TAP1	TAP2	TAP3	TAP4	TAP5
15	30	45	60	75

DS1000S-50 (DALLAS SEMICONDUCTOR)(DELAY TIME=50 nS)
C-MOS DELAY LINE
- TOP VIEW -



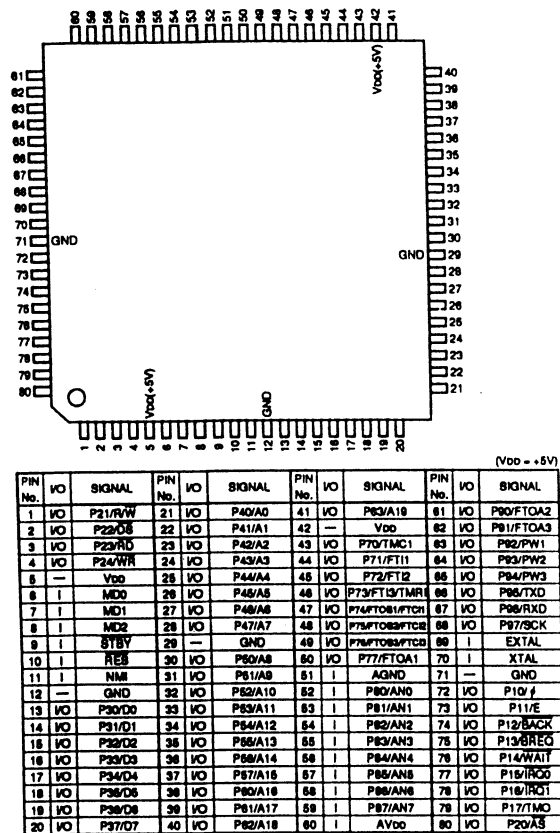
TYPE. NO.	DELAY TIME (nS)				
	TAP1	TAP2	TAP3	TAP4	TAP5
DS1000-50	10	20	30	40	50
DS1000-60	12	24	36	48	60
DS1000-75	15	30	45	60	75
DS1000-100	20	40	60	80	100
DS1000-125	25	50	75	100	125
DS1000-150	30	60	90	120	150
DS1000-175	35	70	105	140	175
DS1000-200	40	80	120	160	200
DS1000-250	50	100	150	200	250
DS1000-500	100	200	300	400	500

HDC443V2 (HITACHI)
- TOP VIEW -



No.	I/O	Name	No.	I/O	Name	No.	I/O	Name	No.	I/O	Name
1	-	VDD	31	-	GND	61	-	VDD	91	-	GND
2	O	DTT0	32	O	DTE	62	I/O	DAA	92	I	WR
3	O	DTT1	33	I	CLK	63	I/O	DA9	93	I	DDD0
4	O	DTT2	34	I	TMGP	64	I/O	DA8	94	I	DDD1
5	O	DTT3	35	I	PRIN	65	O	CHOO	95	I	DDD2
6	O	DTT4	36	I	PRNS	66	O	AFOO	96	I	DDD3
7	O	DTT5	37	I	RESE	67	O	AAAB	97	I	DDD4
8	O	DTT6	38	I	LI7	68	O	ABBB	98	I	DDD5
9	O	DTT7	39	I	LI6	69	I	TSA	99	I	DDD6
10	O	DTT8	40	I	LI5	70	I	TSB	100	I	DDD7
11	O	DTT9	41	I	LI4	71	I	RWA	101	I	A0A
12	O	DTT10	42	I	LI3	72	I	RWB	102	I	A1A
13	I	TI07	43	I	LI2	73	I	RWC	103	I	A2A
14	O	TO04	44	I	LI1	74	I	LG	104	I	A3A
15	-	GND	45	I	LI0	75	-	GND	105	I	CS2
16	O	HDC	46	I/O	DA7	76	I/O	AD0	106	I	CS1
17	O	ST0B	47	I/O	DA6	77	I/O	AD1	107	I	CS0
18	O	DATA	48	I/O	DA5	78	I/O	AD2	108	O	TO02
19	O	DATB	49	I/O	DA4	79	I/O	AD3	109	I	TI03
20	O	DRV	50	I/O	DA3	80	I/O	AD4	110	I	TI04
21	I	TI08	51	I/O	DA2	81	I/O	AD5	111	O	TO03
22	O	TO05	52	I/O	DA1	82	I/O	AD6	112	I	TI05
23	O	TO01	53	I/O	DA0	83	I/O	AD7	113	I	TI06
24	I	TI01	54	I/O	DAF	84	I/O	AD8	114	I	TSNR
25	I	TI02	55	I/O	DAE	85	I/O	AD9	115	I	TWEB
26	O	TO06	56	I/O	DAD	86	I/O	ADA	116	I	TTOE
27	I	TI10	57	I/O	DAC	87	O	OPTW	117	I	TTCS
28	I	TI11	58	I/O	DAB	88	O	OPTO	118	I	CLOK
29	I	TI09	59	I	IOEN	89	I	OLD	119	O	OSO
30	-	VDD	60	-	GND	90	-	VDD	120	-	GND

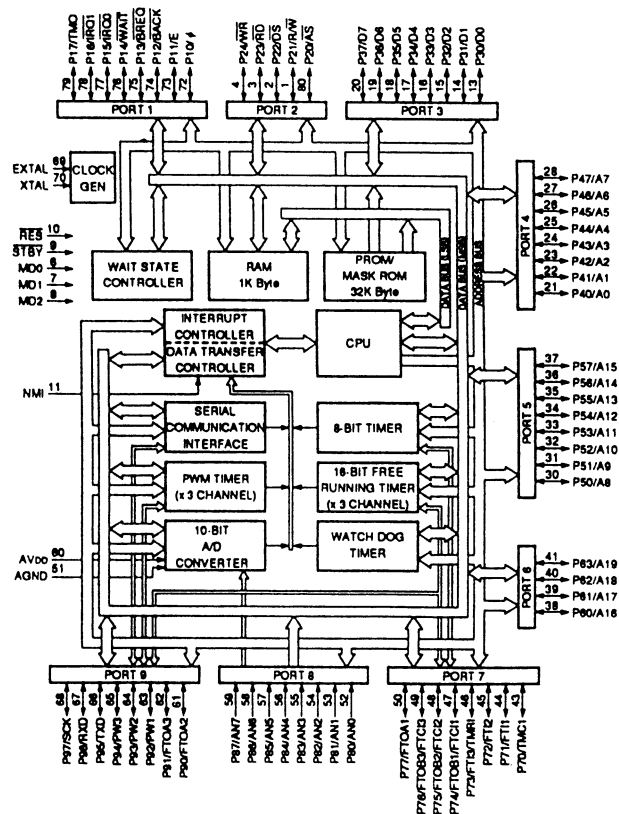
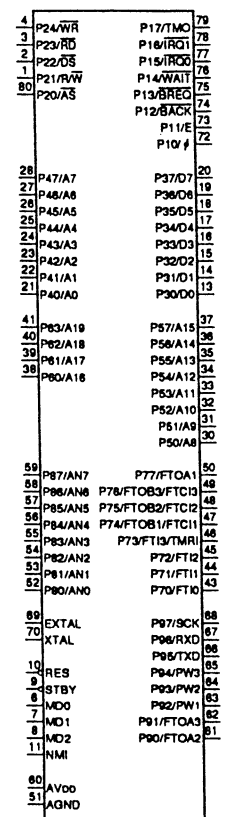
HD6475328F-FMY10-01 (HITACHI) FLAT PACKAGE
 HD6475368F-FMY13-01 (HITACHI) FLAT PACKAGE
 C-MOS MICRO COMPUTER UNIT
 -TOP VIEW-



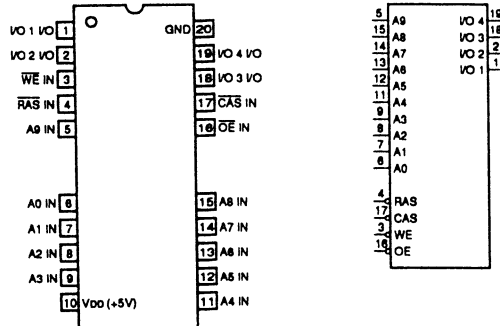
INPUT
 AGND : GND FOR A/D CONVERTER
 AN0-AN7 : ANALOG
 AV_{DD} : REFERENCE VOLTAGE FOR A/D CONVERTER
 BREQ : BAS REQUEST
 EXTAL : CRYSTAL OSCILLATOR & EXTERNAL CLOCK (φ CLOCK x 2)
 FCI1-FCI3 : FRT COUNTER CLOCK
 FTI1-FTI3 : FRT INPUT CAPTURE
 IRQ0-IRQ1 : INTERRUPT REQUEST
 MD0-MD2 : MODE SETTING
 NMI : NON-MASKABLE INTERRUPT
 P80-P87 : PORT 8
 RES : RESET
 RXD : RECEIVE DATA
 STBY : STANDBY
 TMC1 : 8-BIT TIMER CLOCK
 TMR1 : 8-BIT TIMER COUNTER RESET
 WAIT : WAIT
 XTAL : CRYSTAL OSCILLATOR (φ CLOCK x 2)

OUTPUT
 φ : SYSTEM CLOCK
 A0-A19 : ADDRESS BUS
 AS : ADDRESS STROBE
 BACK : BAS REQUEST ACKNOWLEDGE
 DS : DATA STROBE
 E : ENABLE CLOCK
 FTOA1-FTOA3 : FRT OUTPUT COMPEA A
 FTOB1-FTOB3 : FRT OUTPUT COMPEA B
 PW1-PW3 : PWM TIME
 RD : READ
 RW : READ/WRITE
 TMO : 8 BIT TIMER
 TXD : TRANSCIVE DATA
 WR : WRITE

INPUT/OUTPUT
 D0-D7 : DATA BUS
 P10-P17 : PORT 1
 P20-P24 : PORT 2
 P30-P34 : PORT 3
 P40-P47 : PORT 4
 P50-P57 : PORT 5
 P60-P63 : PORT 6
 P70-P77 : PORT 7
 P80-P87 : PORT 8
 SCK : SERIAL CLOCK

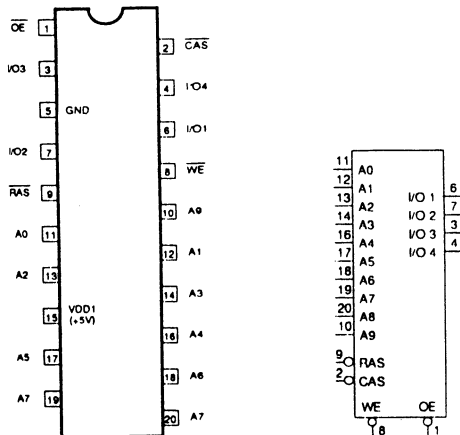


HM51L240AS7 (HITACHI)
C-MOS 2M (524,288 x 4) -BIT DYNAMIC RAM
-TOP VIEW-

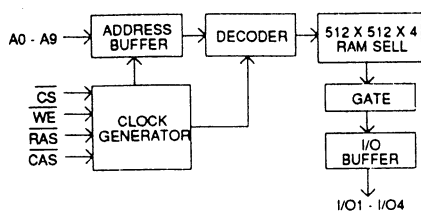


A0-A9 : ADDRESS INPUTS
CAS : COLUMN ADDRESS STROBE INPUT
I/O 1-I/O 4 : DATA INPUTS/OUTPUTS
OE : OUTPUT ENABLE INPUT
RAS : ROW ADDRESS STROBE INPUT
WE : WRITE ENABLE INPUT

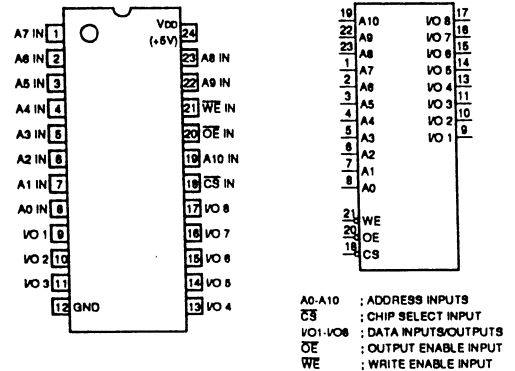
HM514400AS7GS-EL (HITACHI)
C-MOS 4 BIT DYNAMIC RAM
- TOP VIEW -



A0 - A9 : ADDRESS INPUT
CAS : COLUMN ADDRESS STROBE
I/O 1 - I/O 4 : DATA INPUT/OUTPUT
RAS : ROW ADDRESS STROBE
OE : OUTPUT ENABLE INPUT
WE : WRITE ENABLE INPUT



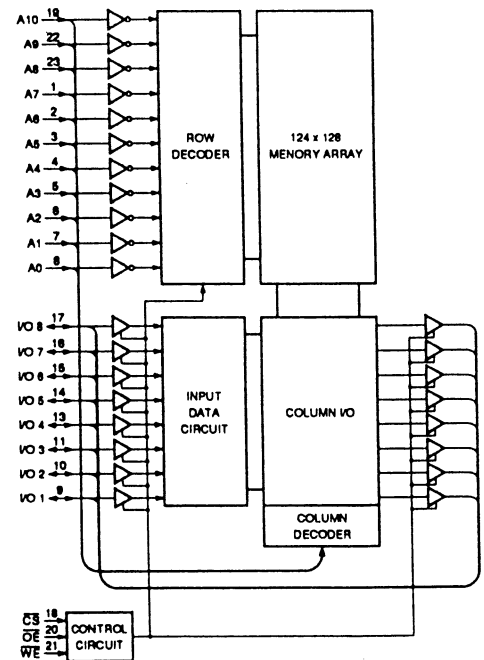
IDT6116SA25S0 (IDT) FLAT PACKAGE
C-MOS 16K (2K x 8) - BIT STATIC RAM
-TOP VIEW-



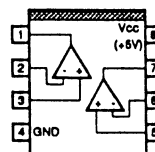
A0-A10 : ADDRESS INPUTS
CS : CHIP SELECT INPUT
I/O1-I/O8 : DATA INPUTS/OUTPUTS
OE : OUTPUT ENABLE INPUT
WE : WRITE ENABLE INPUT

MODE	CS	OE	WE	I/O
STANDBY	1	X	X	HI-Z
READ	0	0	1	DATA OUT
READ	0	1	1	HI-Z
WRITE	0	X	0	DATA IN

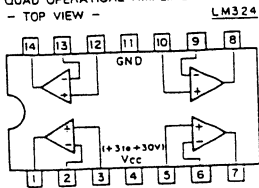
0 : LOW LEVEL
1 : HIGH LEVEL
X : DON'T CARE
HI-Z : HIGH IMPEDANCE



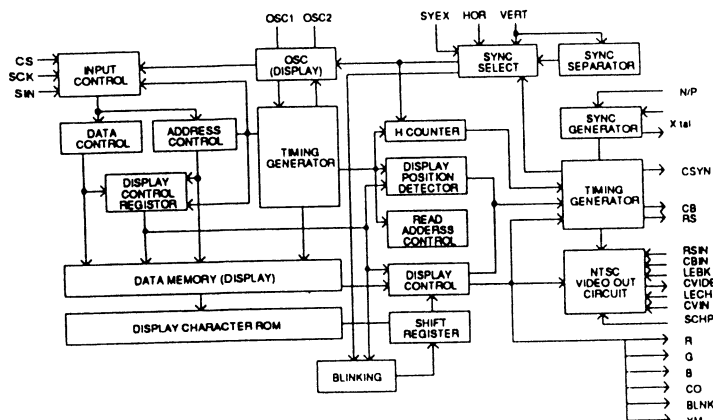
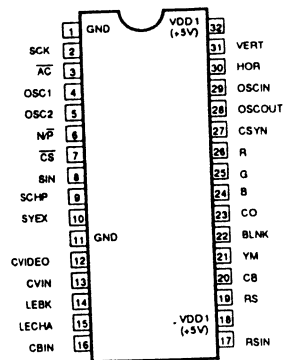
LM358D (TI) FLAT PACKAGE
OPERATIONAL AMPLIFIERS
-TOP VIEW-



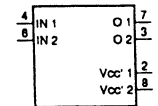
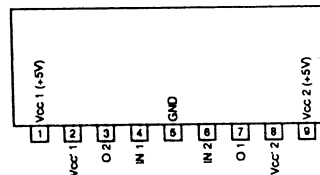
LM324D (TI)
QUAD OPERATIONAL AMPLIFIERS
- TOP VIEW -



M50555-218FP
C-MOS TV DISPLAY CONTROLLER
- TOP VIEW -



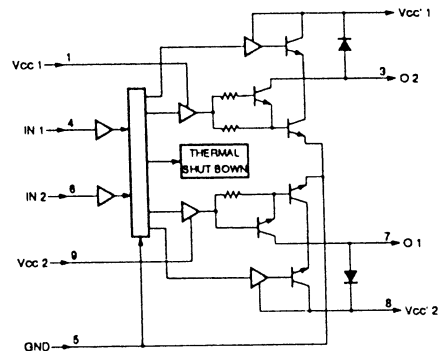
M54544AL (MITSUBISHI)
BI-DIRECTIONAL MOTOR DRIVER WITH THERMAL SHUT DOWN FUNCTION
- PRINTED SIDE VIEW -



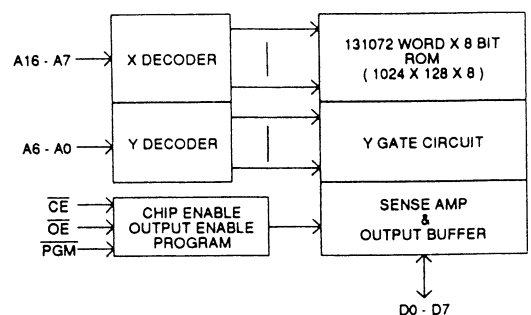
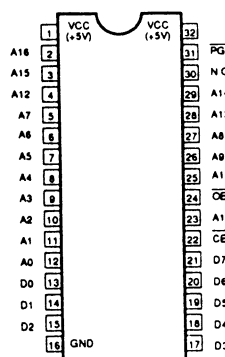
Vcc' 1, Vcc' 2 : POWER SOURCE OUTPUT

INPUT		OUTPUT		FUNCTION
IN 1	IN 2	O 1	O 2	
0	0	"OFF" STATE	"OFF" STATE	IC PASSIVITY
1	0	1	0	POSITIVE ROTATING
0	1	0	1	NEGATIVE ROTATING
1	1	0	0	BRAKE

0 : LOW LEVEL
1 : HIGH LEVEL

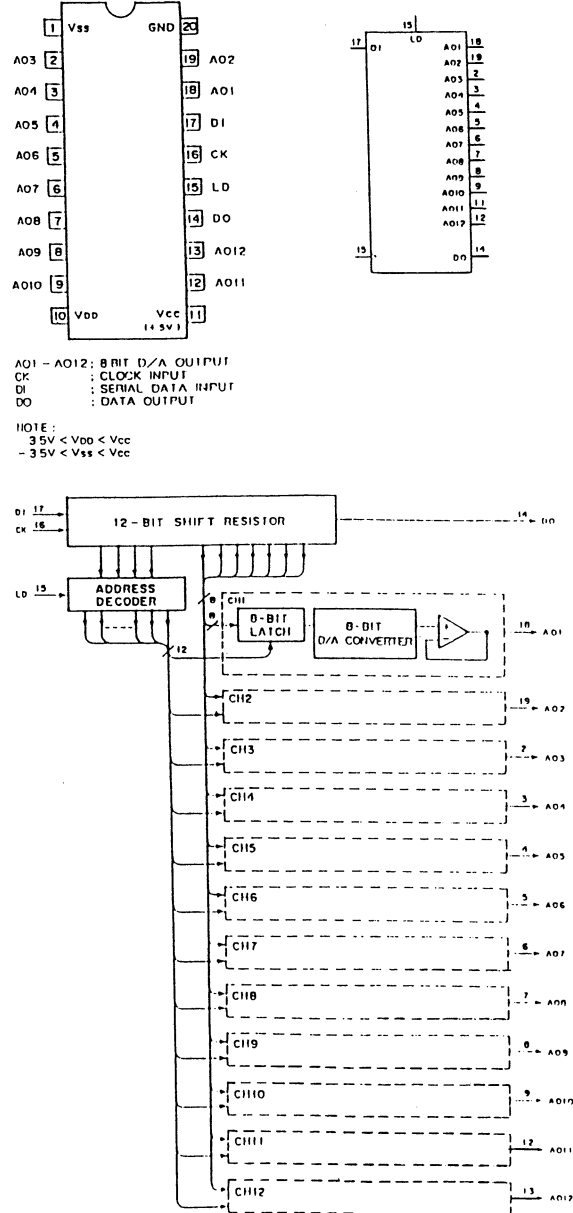


M5M27C101FP-UP12G-E2
M5M27C101FP-UP12M-E2
M5M27C101FP-UP12S-E2
C-MOS ONE TIME PROGRAMMABLE ROM
- TOP VIEW -



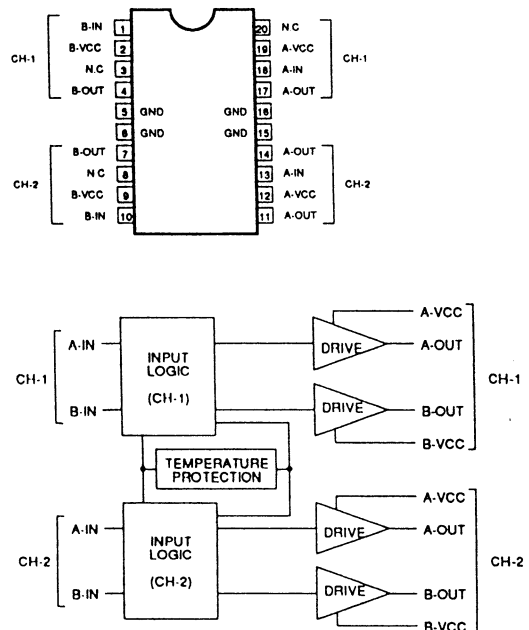
M62352GP (MITSUBISHI) FLAT PACKAGE
CMOS 8 BIT x 12 CHANNEL D/A CONVERTER
(WITH BUFFER OPERATIONAL AMPLIFIER)

— TOP VIEW —



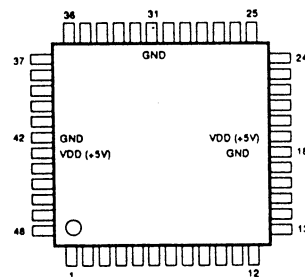
MB3863PF-G-BND
DUAL MODE MOTOR DRIVER

— TOP VIEW —



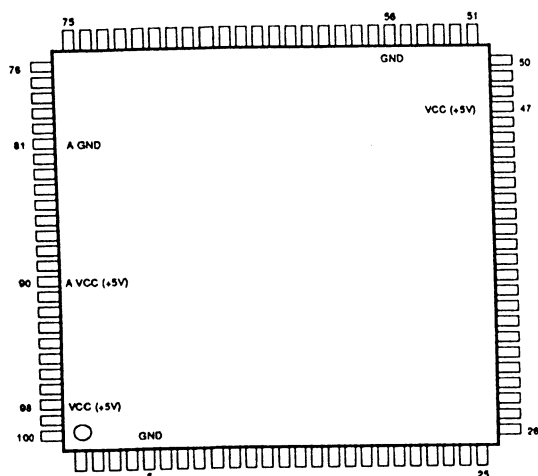
MB621948
CMOS GATE ARRAY

— TOP VIEW —



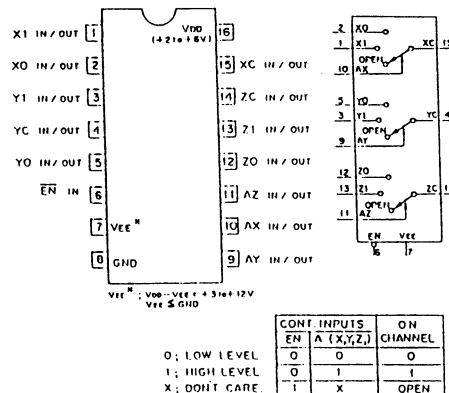
PIN No.	I/O	SIGNAL	PIN No.	I/O	SIGNAL	PIN No.	I/O	SIGNAL	PIN No.	I/O	SIGNAL
1	I	CSBLANK	13	I	SYN2	25	O	HPWO	37	I	NANDI2
2	I	HD	14	I	SYDL0	26	O	HPWON	38	O	NANDO
3	I	VD	15	I	SYDL1	27	O	WIN	39	I	VDSEL
4	I	SYN1	16	I	SYDL2	28	O	WINN	40	I	INTVD
5	I	CLK	17	I	SYDL3	29	O	CP	41	I	EXTVD
6	-	GND	18	-	GND	30	O	CPON	42	-	GND
7	I	NTSCPAL	19	-	VDD (-5V)	31	-	GND	43	-	VDD (+5V)
8	I	RESET	20	I	BLDL0	32	O	DLBLKO	44	O	VSELOUT
9	I	HPPD0	21	I	BLDL1	33	O	DLBLON	45	I	DLSEL0
10	I	HPPD1	22	I	BLDL2	34	O	DLSYO	46	I	DLSEL1
11	I	HPPD2	23	I	BLDL3	35	O	DLSYON	47	I	THDL
12	I	HPPD3	24	I	TEST	36	I	NANDI1	48	I	TESTHPWO

MB89093PFV-G-124-BND
C-MOS 8 BIT MICROCOMPUTER
- TOP VIEW -

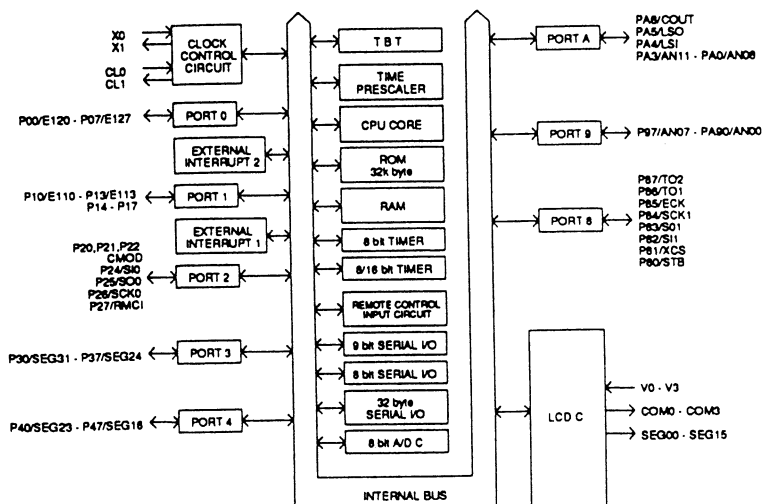
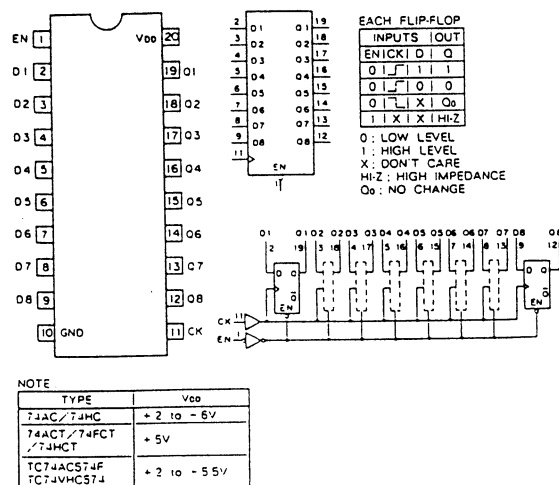


PIN No.	IO	SIGNAL	PIN No.	IO	SIGNAL	PIN No.	IO	SIGNAL	PIN No.	IO	SIGNAL
1	I	MOD0	26	VO	CMOD	51	O	SEG12	76	VO	P83/SO1
2	I	MOD1	27	VO	P24/SIO	52	O	SEG11	77	VO	P84/SCK1
3	I	X0	28	VO	P25/SO0	53	O	SEG10	78	VO	P85/ECK
4	O	X1	29	VO	P26/SCK0	54	O	SEG09	79	VO	P86/TO1
5	-	VSS	30	VO	P27/RMCI	55	O	SEG08	80	VO	P87/TO2
6	I	XRST	31	VO	P30/SEG31	56	-	VSS	81	-	A VSS
7	VO	P00/E120	32	VO	P31/SEG30	57	O	SEG07	82	VO	P80/AN00
8	VO	P01/E121	33	VO	P32/SEG29	58	O	SEG06	83	VO	P91/AN01
9	VO	P02/E122	34	VO	P33/SEG28	59	O	SEG05	84	VO	P92/AN02
10	VO	P03/E123	35	VO	P34/SEG27	60	O	SEG04	85	VO	P93/AN03
11	VO	P04/E124	36	VO	P35/SEG26	61	O	SEG03	86	VO	P94/AN04
12	VO	P05/E125	37	VO	P36/SEG25	62	O	SEG02	87	VO	P95/AN05
13	VO	P06/E126	38	VO	P37/SEG24	63	O	SEG01	88	VO	P96/AN06
14	VO	P07/E127	39	VO	P40/SEG23	64	O	SEG00	89	VO	P97/AN07
15	VO	P10/E110	40	VO	P41/SEG22	65	I	V3	90	-	VCC (+5V)
16	VO	P11/E111	41	VO	P42/SEG21	66	I	V2	91	VO	PA0/AN08
17	VO	P12/E112	42	VO	P43/SEG20	67	I	V1	92	VO	PA1/AN09
18	VO	P13/E113	43	VO	P44/SEG19	68	I	V0	93	VO	PA2/AN10
19	VO	P14	44	VO	P45/SEG18	69	O	COM0	94	VO	PA3/AN11
20	VO	P15	45	VO	P46/SEG17	70	O	COM1	95	VO	PA4/LSI
21	VO	P16	46	VO	P47/SEG16	71	O	COM2	96	VO	PA5/LSO
22	VO	P17	47	-	VCC (+5V)	72	O	COM3	97	VO	PA6/COU
23	VO	P20	48	O	SEG15	73	VO	P80/STB	98	-	VCC (+5V)
24	VO	P21	49	O	SEG14	74	VO	P81/XCS	99	O	CL1
25	VO	P22	50	O	SEG13	75	VO	P82/SI1	100	I	CL0

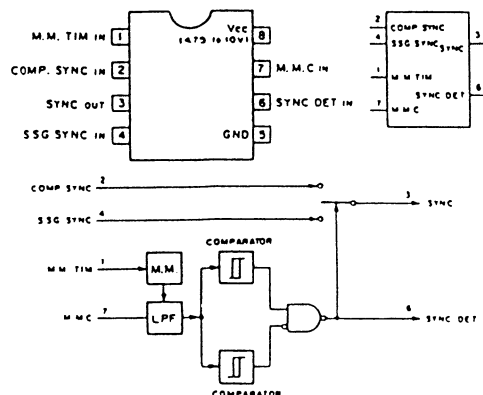
MC74HC4053F (MOTOROLA) FLAT PACKAGE
CMOS TRIPLE 2-CHANNEL ANALOG MULTIPLEXER/DEMULPLEXER
- TOP VIEW -



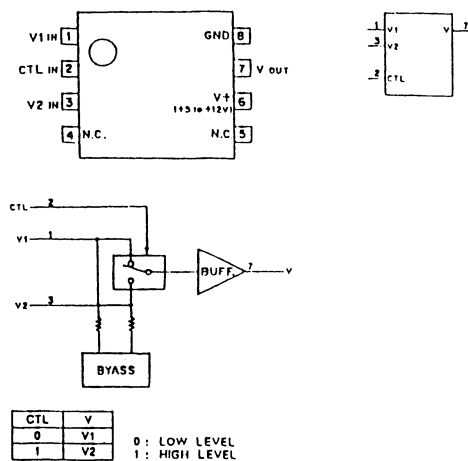
MC74HC574AF (MOTOROLA) FLAT PACKAGE
- TOP VIEW -



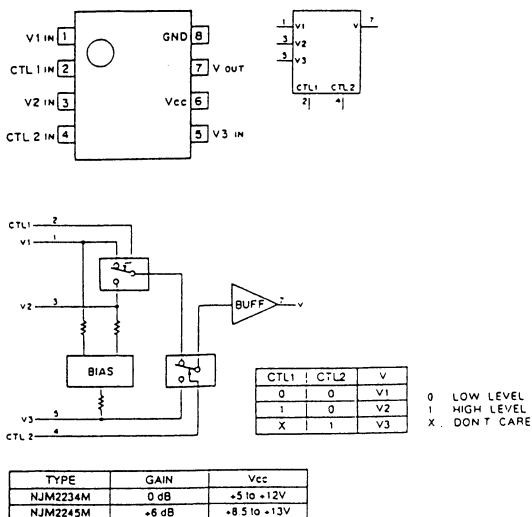
NJM2230M (JRC) FLAT PACKAGE
VIDEO SIGNAL DETECTOR
- TOP VIEW -



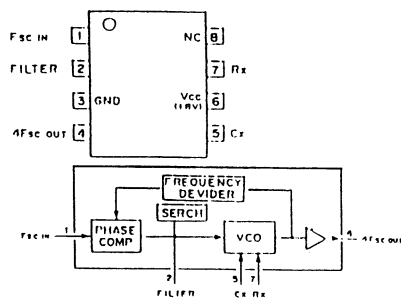
NJM2233BM (JRC) FLAT PACKAGE
2-INPUT SIGNAL VIDEO SWITCH
- TOP VIEW -



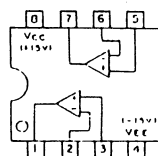
NJM2234M (JRC) FLAT PACKAGE
3-INPUT VIDEO SIGNAL SWITCH
- TOP VIEW -



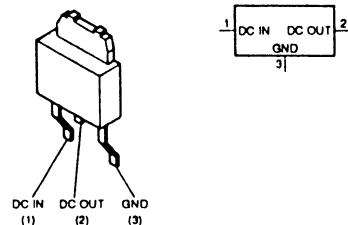
NJM2240M (JRC) FLAT PACKAGE
4-TIMES OSCILLATOR
- TOP VIEW -



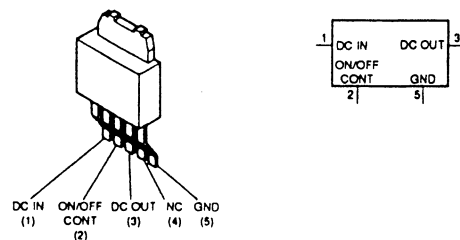
NJM4560M (JRC) FLAT PACKAGE
DUAL OPERATIONAL AMPLIFIER
- TOP VIEW -



PQ05SZ1U (SHARP) SERIES REGULATOR

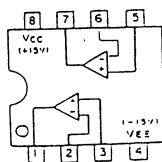


PQ05TZ1U (SHARP) SERIES REGULATOR



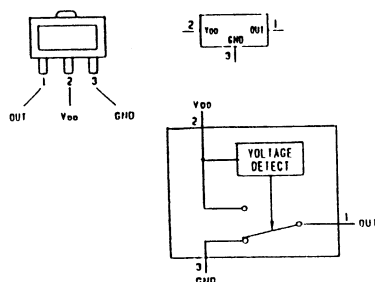
RC4558PS (TI) FLAT PACKAGE

DUAL OPERATIONAL AMPLIFIER
- TOP VIEW -



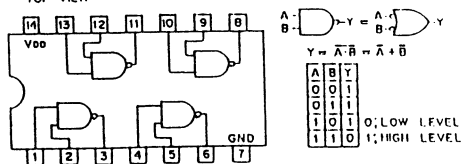
S-8054ALB-LM-S (SEKIO I AND E) 4.00-4.30V

C-MOS VOLTAGE DETECTOR
- TOP VIEW -



SN74HC00ANS (TI) FLAT PACKAGE

C-MOS QUAD 2-INPUT NAND GATE
- TOP VIEW -

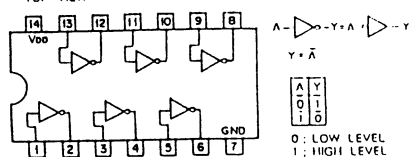


NOTE:

TYPE	V _{DD}
TC74AC00P	+2 to +5.5V
TC74AC00F	+5V
MC74HC00N	+5V
74ACT00PC	+2 to +6V
OTHER TYPES	+2 to +6V

SN74HC04ANS (TI) FLAT PACKAGE

C-MOS HEX INVERTERS
- TOP VIEW -

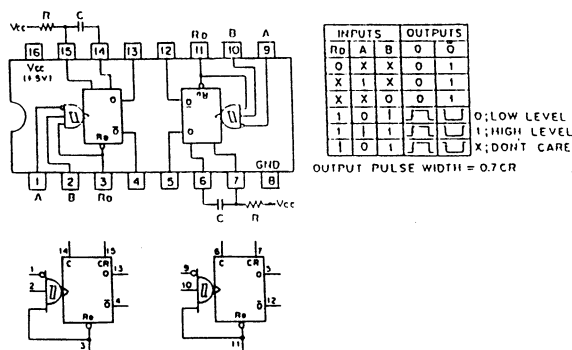


NOTE:

TYPE	V _{DD}
74HC04 TYPE	+5V
74VHC	+2 to +5.5V
TC74AC04 TYPE	+4.5 to +5.5V
74ACT04 TYPE	+2 to +8V
OTHER TYPES	+2 to +8V

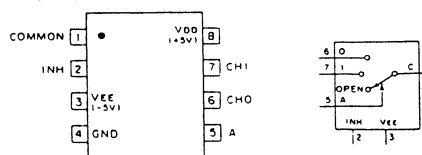
SN74LS221NS (TI) FLAT PACKAGE

1TL MONOSTABLE MULTIVIBRATOR WITH SCHMITT TRIGGER INPUT
- TOP VIEW -



TC4W53F (TOSHIBA) FLAT PACKAGE

C-MOS 2-CHANNEL MULTIPLEXER/DEMULTIPLEXER
- TOP VIEW -

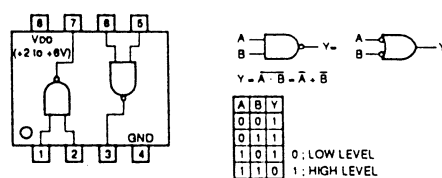


CONT. INPUT	ON CHANNEL
INH. A	
0 0	0
0 1	1
1 X	OPEN

0: LOW LEVEL
1: HIGH LEVEL
X: DON'T CARE

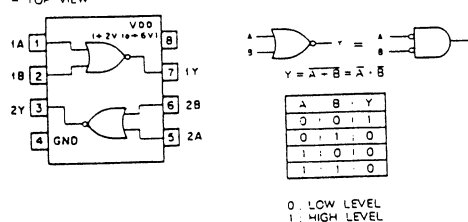
TC7W00F (TOSHIBA) FLAT PACKAGE

C-MOS DUAL 2-INPUT NAND GATE
- TOP VIEW -

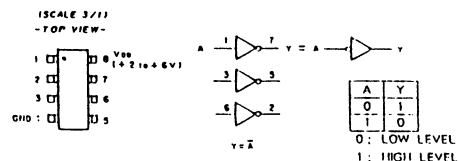


TC7W02F (TOSHIBA) FLAT PACKAGE

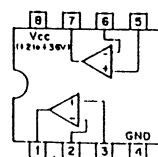
C-MOS DUAL 2-INPUT NOR GATE
- TOP VIEW -



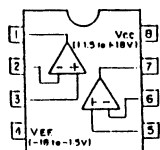
TC7WU04F (TOSHIBA) CHIP PACKAGE CMOS HEX INVERTERS



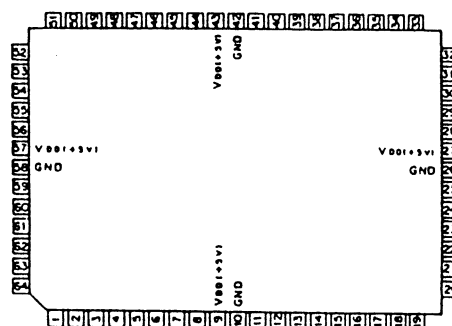
UPC393G2 (NEC) FLAT PACKAGE DUAL VOLTAGE COMPARATORS - TOP VIEW -



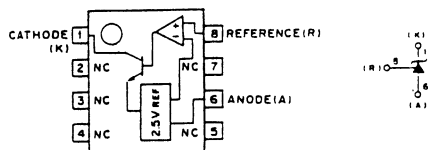
TL082CPS (TI) FLAT PACKAGE OPERATIONAL AMPLIFIER (JFET INPUT) - TOP VIEW -



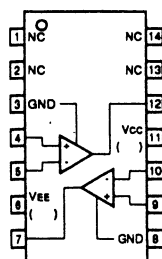
UPD65006GF-250-3B8 (NEC) CMOS - TOP VIEW -



TL431CM (TI) FLAT PACKAGE PROGRAMMABLE SHUNT REGULATOR DIODE

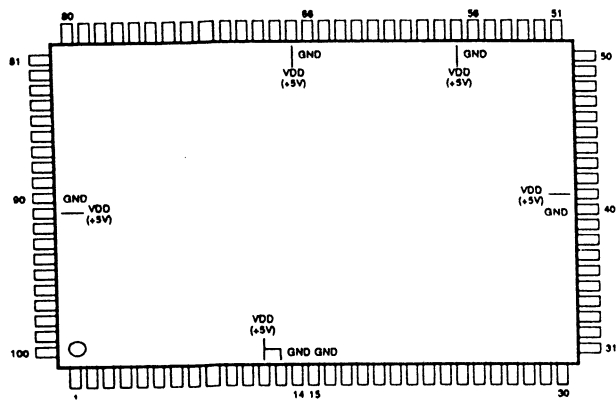


UPC319G2 (NEC) FLAT PACKAGE DUAL VOLTAGE COMPARATOR -TOP VIEW-



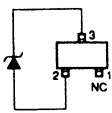
PIN NO.	PIN NAME	PIN NO.	PIN NAME	PIN NO.	PIN NAME	PIN NO.	PIN NAME
1		17	P8	33		49	INT VD
2		18	P9	34		50	
3	MEMO HDL	19	P10	35	HDL7	51	
4	SWB HDL	20	CAS1	36	HDL6	52	INT HD
5	SWD VD	21	CAS2	37	HDL5	53	INT SYNC
6	VBLK	22	CUP	38	HDL4	54	SWD HD
7	PO	23	VBLK	39	HDL3	55	SWB SYNC
8	P1	24	SEN	40	HDL2	56	SIG DET
9	VDD	25	IN/M	41	HDL1	57	VDD
10	GND	26	GND	42	GND	58	GND
11	P2	27	VDD	43	VDD	59	HD
12	P3	28	HD RET	44	D/A CK	60	SYNC
13	P4	29	HD OUT	45	RES	61	VD
14	P5	30	RES	46	CK	62	SWB HD
15	P6	31	HDL9	47	EXT D/A	63	SWB SYNC
16	P7	32	HDL8	48	INT D/A	64	INT SYNC

UPD65013GF-407-3BA
C-MOS GATE ARRAY
— TOP VIEW —



PIN No.	I/O	SIGNAL	PIN No.	I/O	SIGNAL	PIN No.	I/O	SIGNAL	PIN No.	I/O	SIGNAL
1		CS1O	26		CAS2	51		A0	76		G2BE
2		CSOO	27		CAS1	52		A1	77		G1AE
3		MFY3	28		CAS0	53		A2	78		G1BE
4		MY3	29		RAS9	54		A3	79		G1AW
5		MY2	30		RAS8	55		A4	80		G1BW
6		MY1	31		RAS7	56		GND	81		R2AW
7		MY0	32		RAS6	57		VDD (+5V)	82		R2BW
8		Y3	33		RAS5	58		A5	83		R2AE
9		Y2	34		RAS4	59		A6	84		R2BE
10		Y1	35		RAS3	60		A7	85		R1AE
11		Y0	36		RAS2	61		A8	86		R1BE
12		VDD (+5V)	37		RAS1	62		A9	87		R1AW
13		VDD (+5V)	38		RAS0	63		B2BW	88		R1BW
14		GND	39		CAS5	64		B2AE	89		INMB
15		GND	40		GND	65		B2AW	90		GND
16		CS2B	41		VDD (+5V)	66		GND	91		VDD (+5V)
17		CRB	42		CAS6	67		VDD (+5V)	92		AEN
18		CS1B	43		CAS7	68		B2BE	93		HBL
19		BCBB	44		CAS8	69		B1AE	94		VBL
20		BCGB	45		ABRB	70		B1BE	95		CUP
21		BCRB	46		CAS9	71		B1AW	96		CRY
22		MBRW	47		CS0	72		B1BW	97		CS4
23		FTHB	48		CS1	73		G2AW	98		CS4O
24		CAS4	49		CS2	74		G2BW	99		CS3O
25		CAS3	50		CS3	75		G2AE	100		CS2O

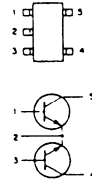
02CZ2.0

(SCALE 5/1)
-TOP VIEW-

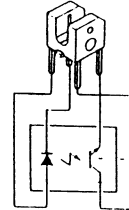
1T33C-01



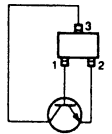
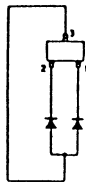
2SC4207

(SCALE 6/1)
TOP VIEW

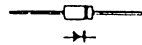
GP1S23



MSC4116

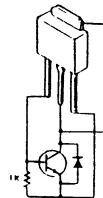
(SCALE 5/1)
-TOP VIEW-1S2835
1S2836(SCALE 4/1)
TOP VIEW

10E-2

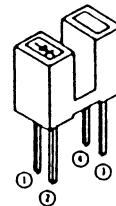


2SD992

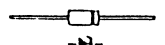
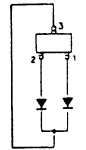
(SCALE 2/1)



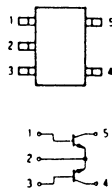
GP1S54



RD9.1EW

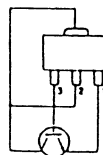
1S2837
1SS302
MA152WK(SCALE 4/1)
TOP VIEW

2SA1618



2SD999-CLCK

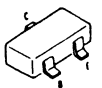
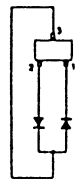
TOP VIEW (SCALE 4/1)



GP2S40K



RN1302-TE85L

1SS123
1SS226(SCALE 4/1)
TOP VIEW

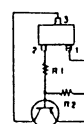
2SB962

(SCALE 2/1)



DTA114EK

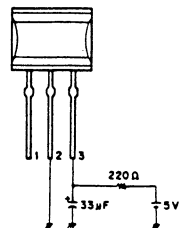
TOP VIEW (SCALE 4/1)



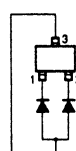
MA8027-L

(SCALE 6/1)
TOP VIEW

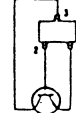
SBX8015-H

1: Rev1
2: GND
3: Vcc

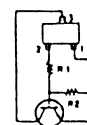
1SS300

(SCALE 5/1)
-TOP VIEW-

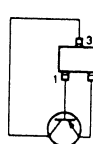
2SC1623

(SCALE 4/1)
TOP VIEWDTC114EK
DTC124EK
DTC144EK

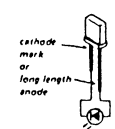
TOP VIEW (SCALE 4/1)



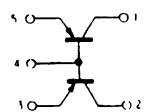
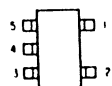
MAS1586

(SCALE 5/1)
-TOP VIEW-

SLP-255B

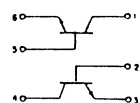


XN2401

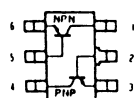


XN4501

(SCALE 6/11)
TOP VIEW



XN4601



SECTION 5 EXPLODED VIEWS

NOTE:

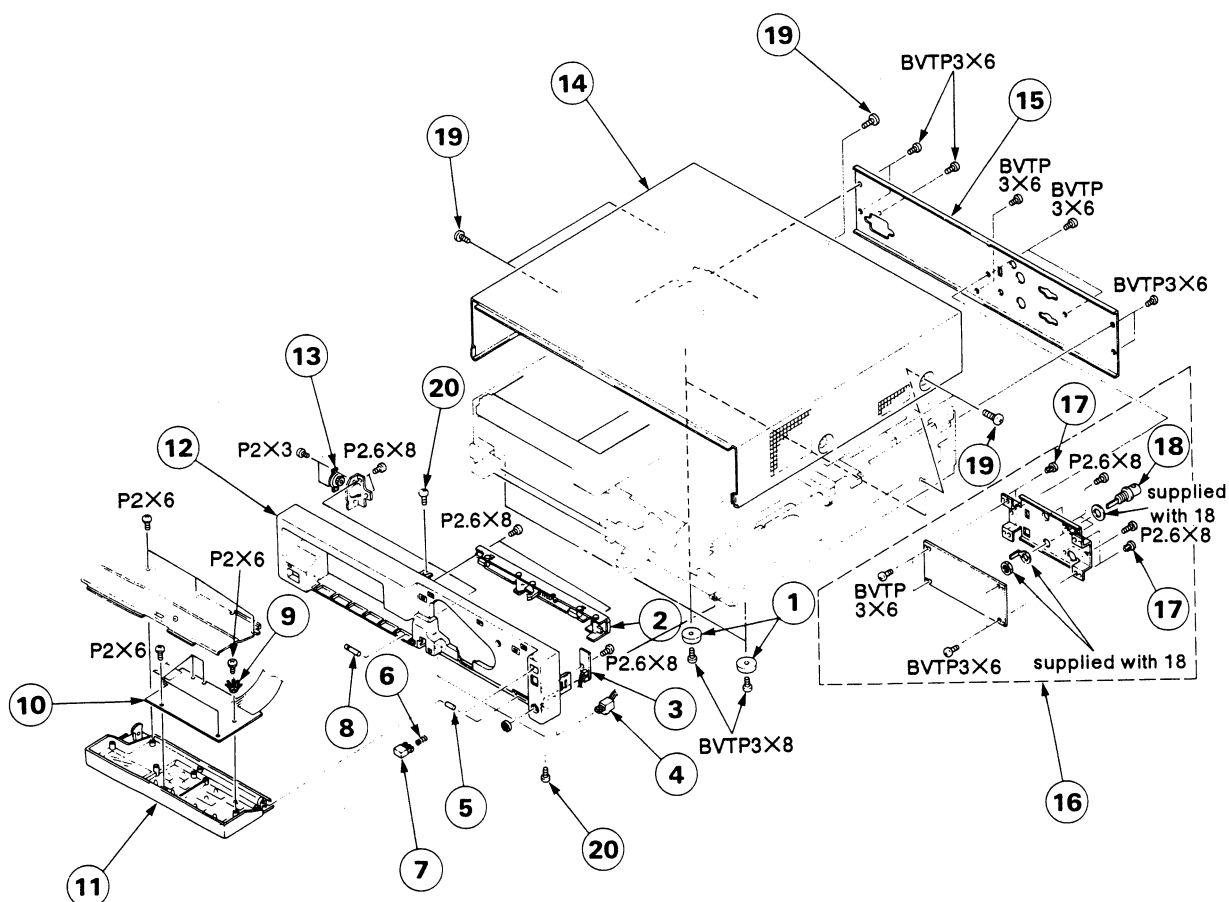
- Items with no part number and no description are not stocked because they are seldom required for routine service.
- The construction parts of an assembled part are indicated with a collation number in the remark column.

- Items marked " * " are not stocked because they are seldom required for routine servicing. Some delay should be expected when ordering these items.

The components identified by shading and mark **Δ** are critical for safety. Replace only with part number specified.

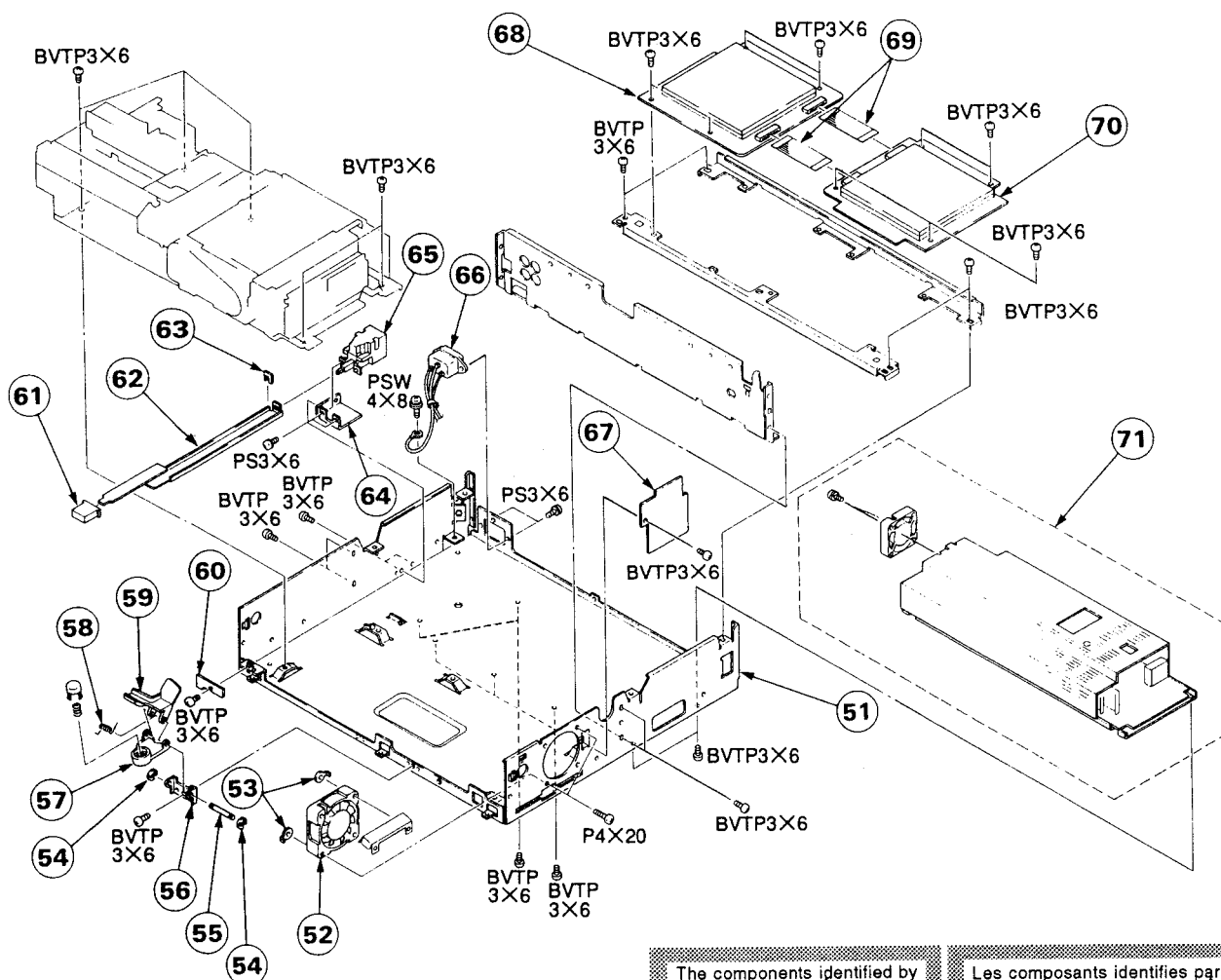
Les composants identifiés par une trame et une marque **Δ** sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

5-1. CABINET ASSEMBLY



Ref. No	Part No.	Description	Remark	Ref. No	Part No.	Description	Remark
1	X-4816-109-1	FOOT ASSY, MINI		11	X-3167-716-1	PANEL SUB ASSY, DOOR (UP-1200A)	
2	A-8267-875-C	CLOSE ASSY, DOOR OPEN		12	X-3167-717-1	PANEL SUB ASSY, DOOR (UP-1200AEPM)	
3	*A-8275-451-A	PTC-27 BOARD, COMPLETE		13	X-3167-373-2	PANEL SUB ASSY, FRONT	
4	1-507-195-21	SPECIAL REMOTE CONTROL JACK		14	3-712-786-21	DUMPER, OIL	
5	3-183-189-01	SHAFT (R), DOOR FULCRUM		15	*3-183-254-02	COVER, TOP	
6	3-183-581-02	SPRING, COMPRESSION COIL		16	*3-183-247-03	PANEL, REAR (VIDEO) (UP-1200A)	
7	3-183-186-03	BUTTON, OPEN		17	*3-183-247-13	PANEL, REAR (VIDEO) (UP-1200AEPM)	
8	3-183-188-01	SHAFT (L), DOOR FULCRUM		18	*A-8275-446-B	IF-27 BOARD, COMPLETE	
9	3-183-656-01	SPRING (KY), PLATE		19	3-531-576-11	RIVET, NYLON	
10	1-692-855-22	KEYBOARD, FFC WITH		20	1-562-261-41	CONNECTOR, COAXIAL (BNC)	
					3-733-690-01	+B 4X6 (CU, N1)	
					3-184-595-01	SCREW 3X8	

5-2. CHASSIS ASSEMBLY(1)

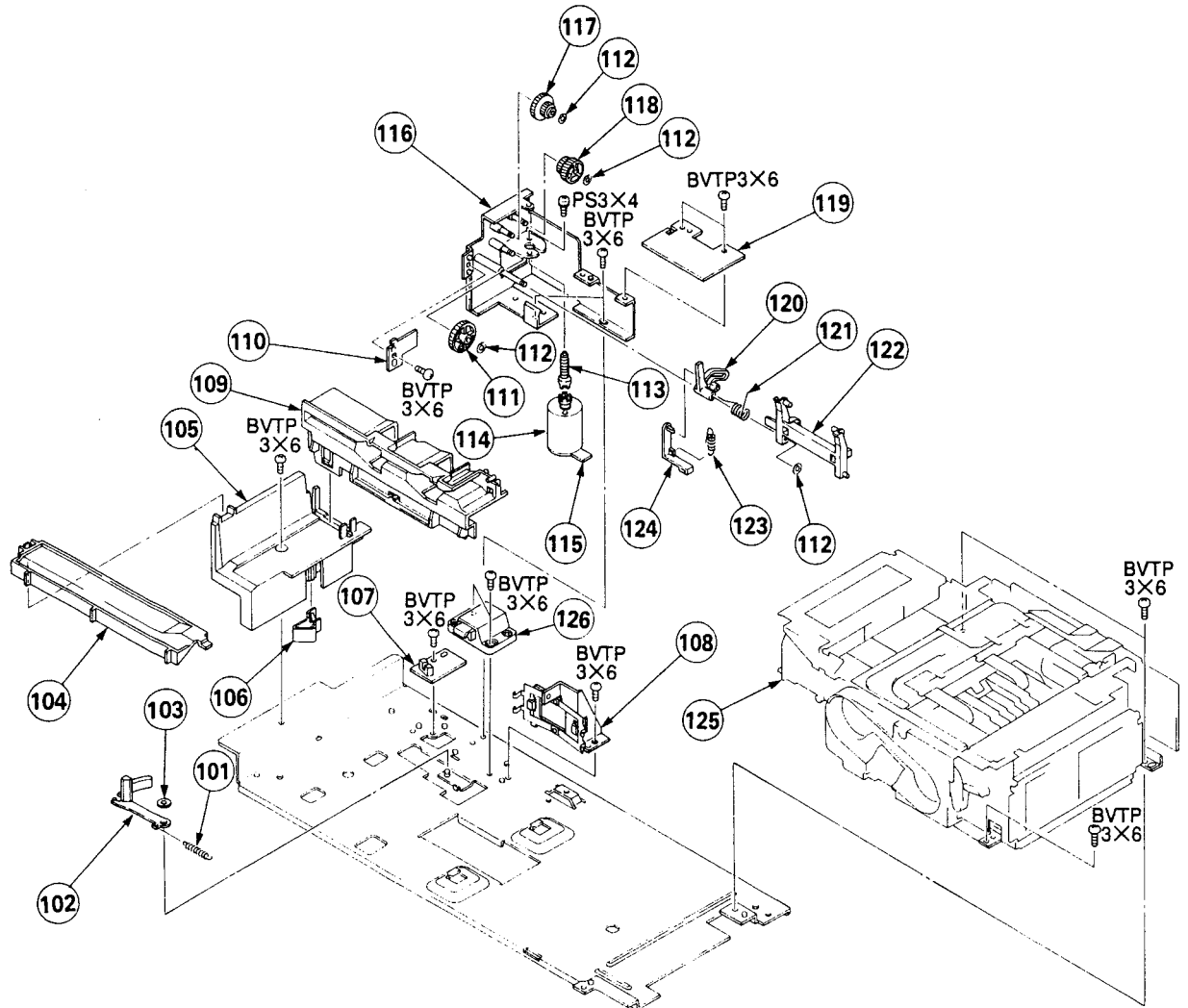


The components identified by shading and mark **Δ** are critical for safety. Replace only with part number specified.

Les composants identifiés par une trame et une marque **Δ** sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

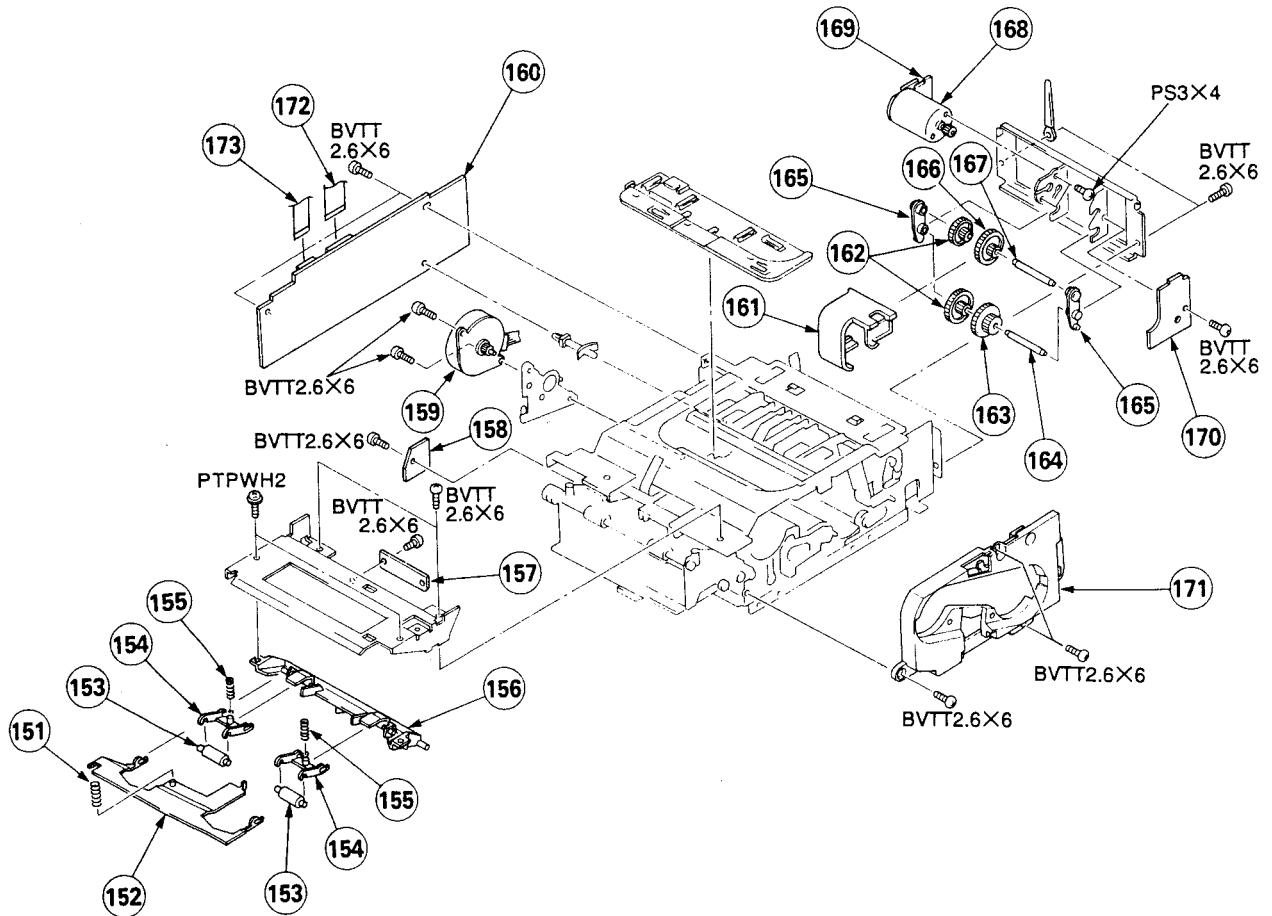
Ref.No	Part No.	Description	Remark	Ref.No	Part No.	Description	Remark
51	*3-183-255-03	CHASSIS		63	3-725-616-01	STOPPER, ROD	
52	1-541-684-42	MOTOR, DC		64	*3-183-178-01	BRACKET, SWITCH	
53	3-534-233-00	NUT, ADJUSTMENT		65	Δ 1-554-880-11	SWITCH, PUSH (AC POWER) (1 KEY)	
54	4-926-219-02	RING (DIA.2.3), RETAINING		66	Δ 1-580-375-11	INLET 3P	
55	3-183-200-01	SHAFT, RIBBON PUSH		67	*A-8275-438-A	KY-15 BOARD, COMPLETE	
56	3-183-187-01	PLATE, FULCRUM		68	*A-8274-829-A	FMY-13 BOARD, COMPLETE (UP-1200A)	
57	3-183-239-02	PLATE PUSH RIBBON			*A-8274-822-A	FMY-13P BOARD, COMPLETE (UP-1200AEPM)	
58	3-183-183-02	SPRING, TORSION		69	1-751-235-11	CABLE, FLAT (FVM-2)	
59	3-183-238-01	DISCHARGE PLATE, RIBBON		70	*A-8274-827-A	VA-76 BOARD, COMPLETE (UP-1200A)	
60	*A-8275-437-A	S-25 BOARD, COMPLETE			*A-8274-835-A	VA-76(B) BOARD, COMPLETE (UP-1200AEPM)	
61	2-431-568-31	BUTTON, POWER		71	Δ *1-413-942-21	SWITCHING REGULATOR (UP-1200A)	
62	*3-183-226-01	ROD, SWITCH			Δ *1-413-946-21	SWITCHING REGULATOR (UP-1200AEPM)	

5-3. CHASSIS ASSEMBLY(2)



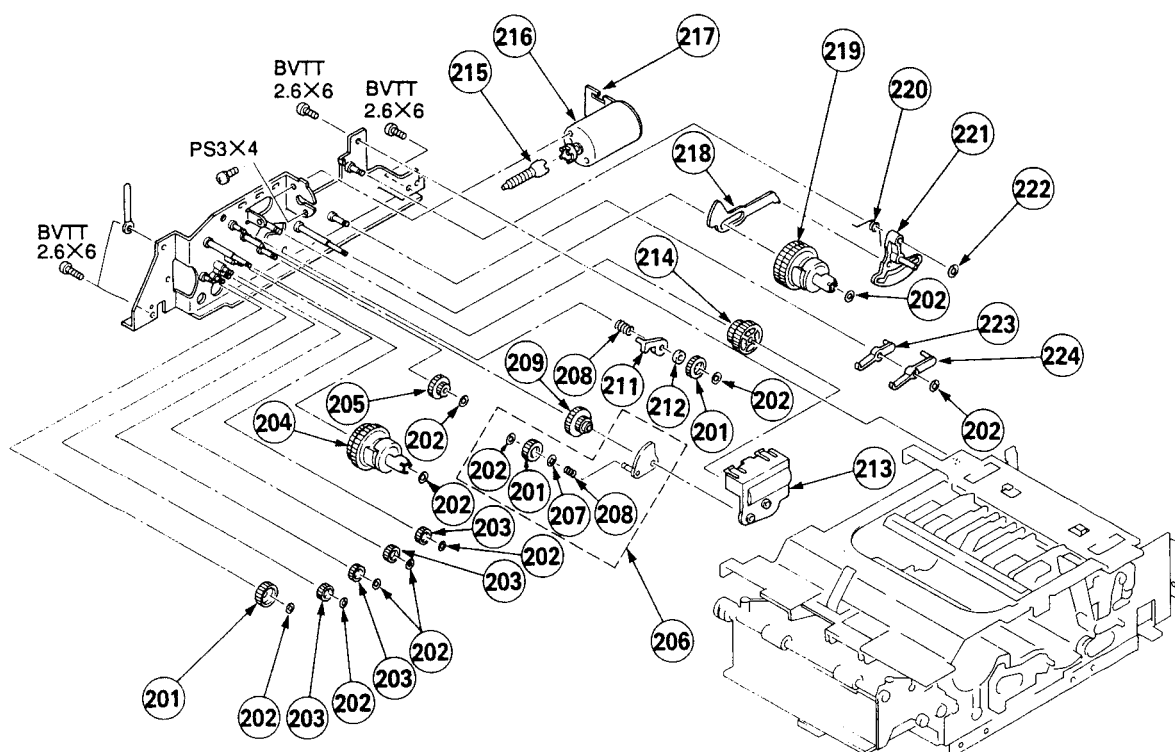
Ref.No	Part No.	Description	Remark	Ref.No	Part No.	Description	Remark
101	3-183-184-01	SPRING, EXTENSION		115	*1-650-853-14	SU-10 BOARD	
102	3-183-605-02	LEVER, PAPER SENSOR		116	X-3167-308-4	SUB ASSY, MOTOR BRACKET	
103	3-325-697-01	WASHER		117	3-950-040-01	GEAR (2), RD	
104	3-183-240-03	GUIDE, EXIT		118	3-950-039-01	GEAR (1), RD	
105	3-183-253-01	GUIDE, TRAY		119	*A-8275-445-A	DUS-12 BOARD, COMPLETE	
106	3-183-181-01	SPRING, TRAY		120	3-183-228-02	LINK	
107	*A-8275-444-A	SW-42 BOARD, COMPLETE		121	3-183-218-02	SPRING, TORSION	
108	X-3167-310-2	COUNTREMEASURE ASSY		122	3-183-251-02	ARM	
109	3-183-610-04	COVER		123	3-183-176-01	SPRING, EXTENSION	
110	*A-8275-443-A	SW-39 BOARD, COMPLETE		124	3-183-229-03	LEVER, TRAY LOCK	
111	X-3167-307-1	SUB GEAR ASSY, BOSS		125	*A-8260-909-A	MD (P201) ASSY (UP-1200A)	
112	4-926-219-02	RING (DIA.2.3), RETAINING		126	*A-8267-804-A	MD (P231) ASSY (UP-1200AEPM)	
113	3-950-038-01	GEAR, WORM			3-183-659-02	LOCK PUSH LATCH	
114	X-3942-172-1	MOTOR ASSY, RIBBON					

5-4. MECHANISM DECK ASSEMBLY(1)



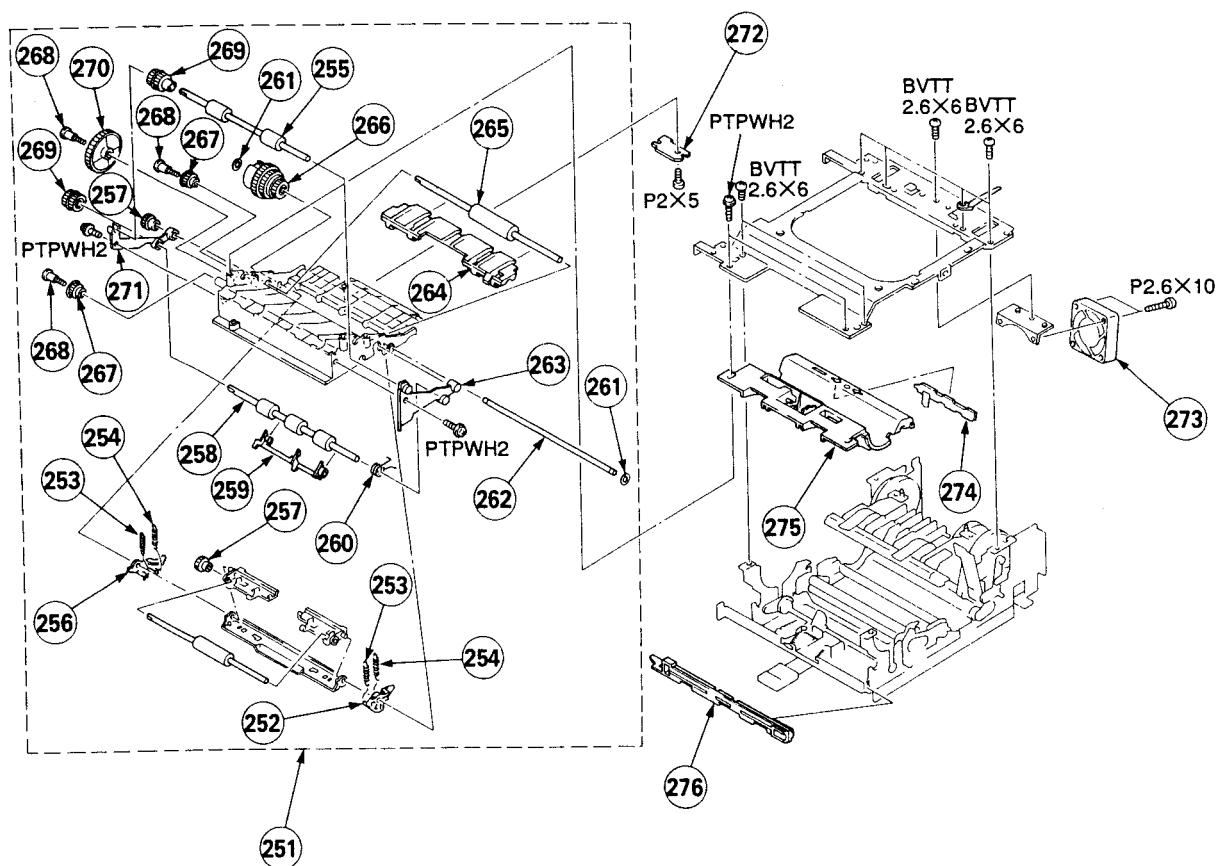
Ref.No	Part No.	Description	Remark	Ref.No	Part No.	Description	Remark
151	3-183-629-01	SPRING, COMPRESSION (PAPER A)		162	3-950-019-01	GEAR (A), HEAD DRIVE	
152	3-183-605-01	SENSOR LEVER		163	3-950-015-01	GEAR (B), HEAD DRIVE	
153	3-950-009-01	ROLLER, PAPER		164	*3-950-020-01	SHAFT, HEAD DRIVE GEAR	
154	3-950-010-01	ARM, PAPER ROLLER		165	*3-950-017-01	HOLDER, HEAD DRIVE GEAR	
155	3-950-013-01	SPRING, COMPRESSION		166	3-956-727-01	GEAR (E), HEAD DRIVE	
156	3-183-609-02	GUIDE, UPPER		167	*3-950-214-01	SHAFT (S), HEAD DRIVE GEAR	
157	*A-8275-442-A	SW-41 BOARD, COMPLETE		168	X-3942-122-1	MOTOR, HEAD DRIVE ASSY	
158	*A-8275-441-A	SW-213 BOARD, COMPLETE		169	*A-8275-435-A	SW-215 BOARD, COMPLETE	
159	X-3942-126-1	MOTOR ASSY, STEPPING		170	*A-8275-436-A	SW-212 BOARD, COMPLETE	
160	*A-8274-824-A	HM-22(L) BOARD, COMPLETE(UP-1200A)		171	X-3167-377-1	GUIDE ASSY, CASSETTE ENTRANCE	
160	*A-8274-819-A	HM-22P(L) BOARD, COMPLETE(UP-1200AEPM)		172	1-765-052-11	WIRE, FLAT TYPE (16 CORE)	
161	*3-952-505-01	GUARD, HEAD GEAR		173	1-765-051-11	WIRE, FLAT TYPE (7 CORE)	

5-5. MECHANISM DECK ASSEMBLY(2)



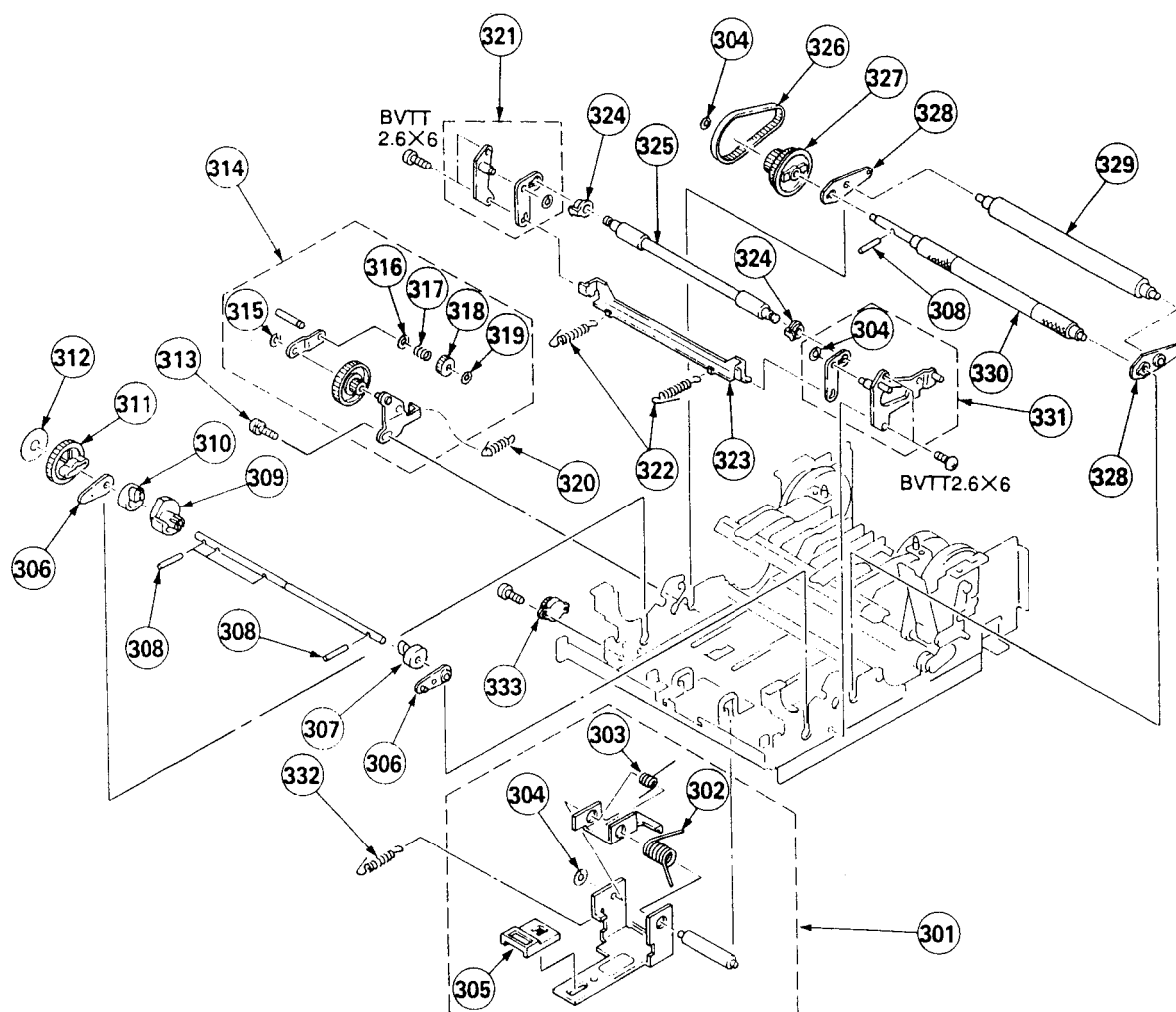
Ref.No	Part No.	Description	Remark	Ref.No	Part No.	Description	Remark
201	3-950-045-01	GEAR (20)		214	3-950-039-01	GEAR (1), RD	
202	3-681-678-00	WASHER, STOPPER		215	3-183-992-01	GEAR, WORM	
203	3-949-935-01	GEAR (16)		216	X-3942-172-1	MOTOR ASSY, RIBBON	
204	A-8263-674-A	REEL (T) BLOCK ASSY, RIBBON		217	*A-8275-440-A	SW-216 BOARD, COMPLETE	
205	3-950-048-01	GEAR, SPM IDLER		218	*3-950-035-02	BOARD, SLIDE	
206	*A-7018-136-A	ARM BLOCK ASSY, PENDULUM		219	A-8263-675-A	REEL (S) BLOCK ASSY, RIBBON	
207	3-701-441-01	WASHER		220	3-950-050-01	SPRING, TORSION	
208	3-949-933-01	SPRING (PENDULUM), COMPRESSION		221	*X-3942-127-1	ARM ASSY, SLIDE	
209	3-950-040-01	GEAR (2), RD		222	4-926-219-02	RING (DIA.2.3), RETAINING	
211	*3-950-046-01	ARM, T LOCK		223	*3-950-037-01	CLAW, RIBBON BRAKE	
212	3-950-051-01	FELT, T LOCK		224	*3-950-036-01	CLAW, RIBBON LOCK	
213	3-950-049-01	COVER, GEAR					

5-6. MECHANISM DECK ASSEMBLY(3)



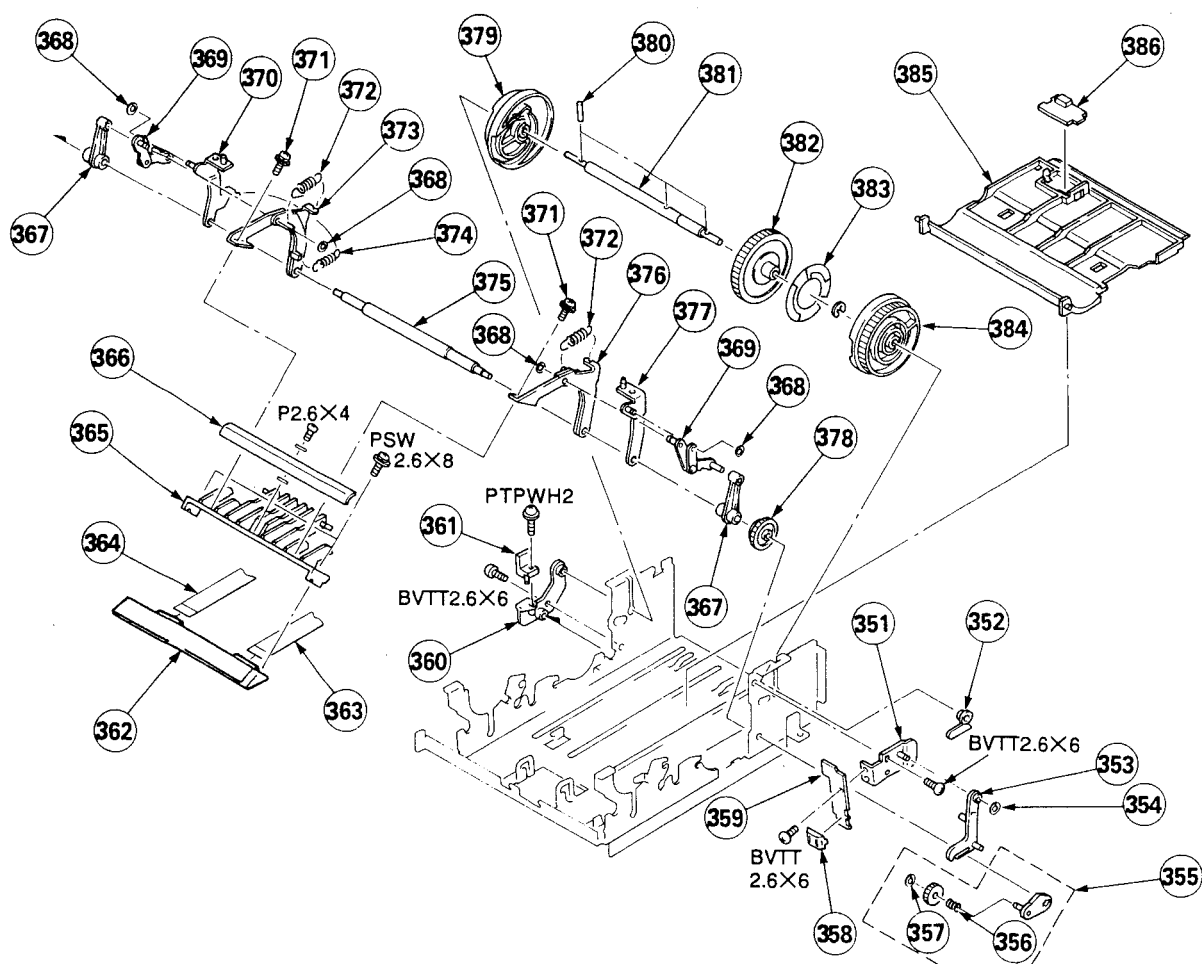
Ref.No	Part No.	Description	Remark	Ref.No	Part No.	Description	Remark
251	*A-8267-975-B	PAPER ASSY		264	*3-949-985-01	SHUTTER, PAPER	
252	*3-949-984-11	LEVER (R), RELEASE		265	3-949-982-01	ROLLER (F)	
253	3-949-994-01	SPRING, TENSION		266	A-7018-141-A	LIMITER BLOCK ASSY	
254	3-949-996-01	SPRING (RELEASE LEVER), TENSION		267	3-949-989-01	GEAR (16F)	
255	3-183-205-01	ROLLER		268	3-950-001-01	SCREW, STEP	
256	*3-949-983-11	LEVER (L), RELEASE		269	3-949-988-01	GEAR (20-21)	
257	3-949-987-01	GEAR (16D)		270	3-183-206-01	GEAR	
258	3-183-607-01	ROLLER K		271	3-183-231-01	SHAFT RETAINER L (EP)	
259	*3-949-986-01	RETAINER, PAPER		272	*A-8275-433-A	SW-208 BOARD, COMPLETE	
260	3-183-204-01	SP (EP), RETAINER		273	1-698-019-31	MOTOR, DC (FAN)	
261	4-926-219-02	RING (DIA.2.3), RETAINING		274	*A-8275-434-A	SW-211 BOARD, COMPLETE	
262	*3-949-990-01	SHAFT, LIMITER		275	*3-950-003-01	GUIDE (1), CASSETTE	
263	3-183-230-01	SHAFT RETAINER R (EP)		276	3-183-232-01	GUIDE, TRAY	

5-7. MECHANISM DECK ASSEMBLY(4)



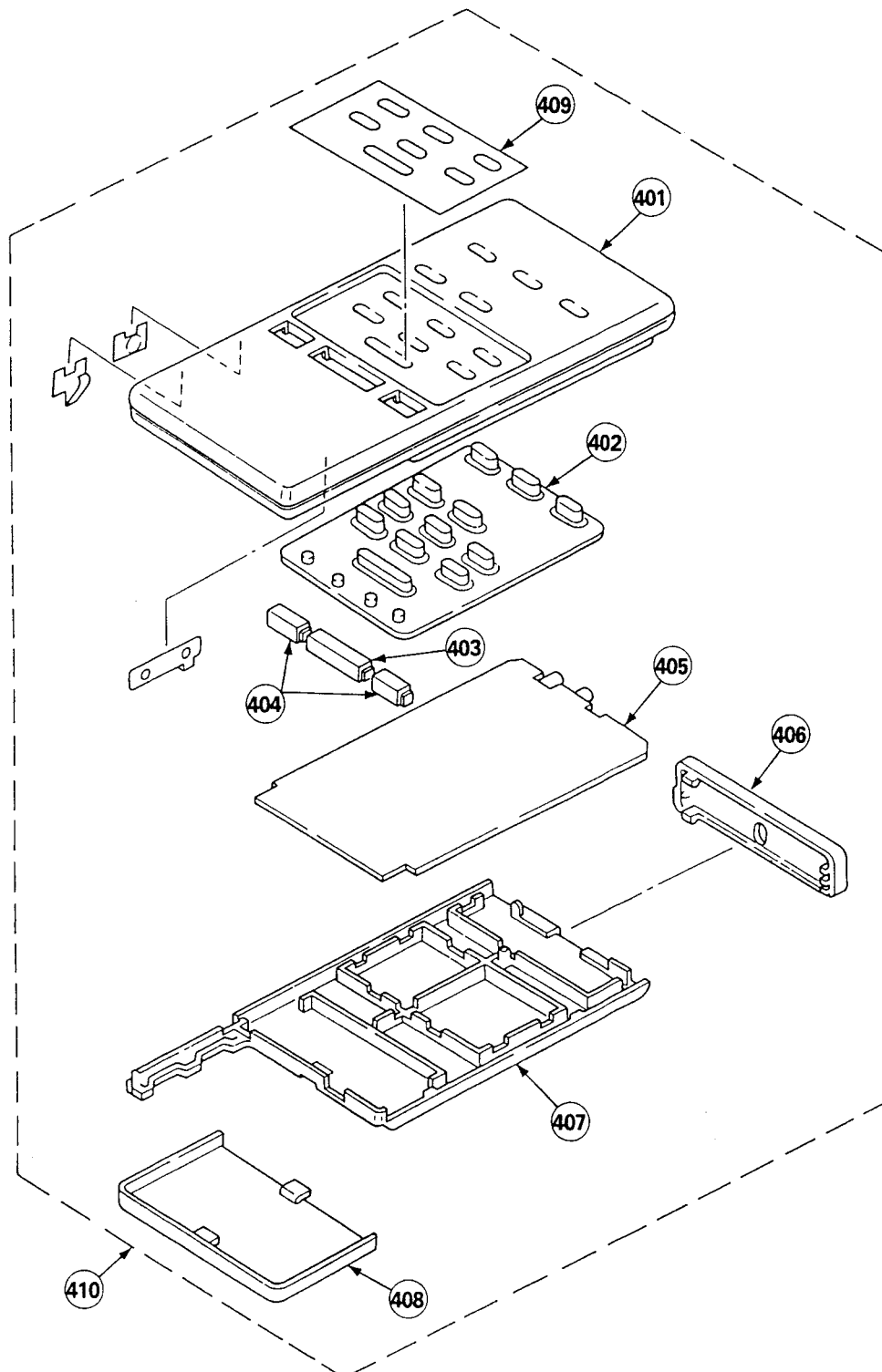
Ref.No	Part No.	Description	Remark	Ref.No	Part No.	Description	Remark
301	*A-8267-878-C	ARM ASSY		317	3-949-933-01	SPRING (PENDULUM), COMPRESSION	
302	3-183-212-02	TORSION SPRING		318	3-949-935-01	GEAR (16)	
303	3-183-213-03	TORSION SPRING		319	3-681-678-00	WASHER, STOPPER	
304	4-926-219-02	RING (DIA. 2.3), RETAINING		320	3-954-567-01	SPRING (TENSION PLATE), TENSION	
305	3-183-209-02	LEVER		321	*A-7018-157-A	ARM (L) BLOCK ASSY, ROLLER	
306	*3-949-912-01	BEARING, PRESS		322	3-955-157-01	SPRING, TENSION	
307	*3-950-308-01	CAM (R), RETAINER ROLLER PRESS		323	*3-949-939-01	PRESSURE, CAP	
308	3-949-911-01	PIN		324	3-949-937-01	BEARING, RETAINER ROLLER	
309	3-183-216-02	CAM		325	3-183-606-01	ROLLER, RETAINER	
310	*3-949-948-01	CAM (L), RETAINER ROLLER PRESS		326	3-949-915-01	BELT	
311	3-949-951-01	GEAR, P DRIVING		327	3-949-918-01	GEAR, CAPSTAN	
312	3-949-952-01	REFLECTOR, P SENSOR		328	3-949-910-01	BEARING, PLATEN	
313	3-951-872-01	SCREW (2.6X6)		329	*3-949-908-01	ROLLER, PLATEN	
314	A-7018-148-A	ARM BLOCK ASSY, TENSION		330	*3-949-907-01	ROLLER, CAPSTAN	
315	3-669-596-01	WASHER (2.3), STOPPER		331	*A-7018-156-A	ARM (R) BLOCK ASSY, ROLLER	
316	3-701-441-01	WASHER		332	3-949-929-01	SPRING (ARM), TENSION	

5-8. MECHANISM DECK ASSEMBLY(5)



Ref.No	Part No.	Description	Remark	Ref.No	Part No.	Description	Remark
351	*X-3942-121-1	ARM ASSY, LOCK		369	*X-3942-117-1	LINK ASSY	
352	3-949-916-01	BEARING, CAM SHAFT		370	*X-3942-119-1	FULCRUM (L) ASSY, LINK	
353	3-950-022-01	ARM, LOCK		371	3-669-607-11	+PSW (SMALL ROUND) (2.6)	
354	3-669-596-01	WASHER (2.3), STOPPER		372	3-954-605-01	SPRING (HEAD), TENSION	
355	A-7018-146-A	GEAR BLOCK ASSY, SWING		373	*X-3942-160-1	ARM ASSY (L), POWER	
356	3-949-933-01	SPRING (PENDULUM), COMPRESSION		374	3-949-973-01	SPRING, TENSION	
357	3-681-678-00	WASHER, SLIT		375	*3-949-950-01	SHAFT, POWER ARM	
358	*3-952-169-01	COVER, SENSOR		376	*X-3942-159-1	ARM ASSY (R), POWER	
359	*A-8275-439-A	SW-210 BOARD, COMPLETE		377	*X-3942-118-1	FULCRUM (R) ASSY, LINK	
360	*3-949-974-01	BEARING, HEAD ARM SHAFT		378	3-950-077-01	GEAR (A), RING SWING	
361	*A-8275-453-A	SW-214 BOARD, COMPLETE		379	3-949-971-01	CAM (L), HEAD POWER	
362	1-543-987-11	HEAD, THERMAL (UP-1200A)		380	3-949-911-01	PIN	
	1-500-114-11	HEAD, THERMAL (UP-1200AEPM)		381	*3-949-968-01	SHAFT, CAM	
363	1-751-238-11	CABLE, FLAT (FHH-1)		382	3-949-969-01	GEAR (C), HEAD DRIVE	
364	1-751-239-11	CABLE, FLAT (FHH-2)		383	3-949-972-01	PLATE, POSITION, HEAD	
365	*3-183-612-01	HEAT SINK		384	3-949-970-01	CAM (R), HEAD POWER	
366	*3-950-142-01	GUIDE, RIBBON		385	*3-949-909-01	GUIDE (2), CASSETTE	
367	3-949-917-01	LEVER, POWER		386	*A-8275-452-A	SW-217 BOARD, COMPLETE	
368	4-926-219-02	RING (DIA.2.3), RETAINING					

5-9. REMOTE CONTROL UNIT



Ref.No	Part No.	Description
401	9-901-744-01	ORNAMENTAL, PANEL
402	9-901-745-01	SHEET, RUBBER
403	2-290-632-00	BUTTON, PUSH (L)
404	2-290-633-01	BUTTON, PUSH (R)
405	9-997-457-01	SR-W2 BOARD

Ref.No	Part No.	Description
406	9-997-453-01	PANEL, FRONT
407	2-290-611-00	CASE, BOTTOM
408	2-290-606-51	COVER, BATTERY
409	9-997-456-01	LABEL, MODEL NUMBER
410	1-465-508-21	COMMANDER, REMOTE

SECTION 6

ELECTRICAL PARTS LIST

VA-76

NOTE:

- Items marked "*" are not stocked because they are seldom required for routine servicing. Some delay should be expected when ordering these items.

- All variable and adjustable resistors have characteristic curve B, unless otherwise stated.

RESISTORS

- All resistors are in ohms.
- F: non-flammable

When indicating part by reference number, please include the board name.

CAPACITORSMF: μ F, PF: μ μ F**COILS**MMH: mH, UH: μ H

The components identified by shading and mark Δ are critical for safety. Replace only with part number specified.

Les composants identifiés par une trame et une marque Δ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

Ref. No	Part No.	Description	Remark	Ref. No	Part No.	Description	Remark
	*A-8274-827-A	VA-76 BOARD, COMPLETE (UP-1200A) *****		C148	1-163-141-00	CERAMIC 0.001 μ F 5%	50V
		<CAPACITOR>		C149	1-164-004-11	CERAMIC 0.1 μ F 10%	25V
C101	1-163-038-00	CERAMIC 0.1 μ F	25V	C150	1-164-346-11	CERAMIC 1 μ F	16V
C102	1-164-004-11	CERAMIC 0.1 μ F 10%	25V	C151	1-163-038-00	CERAMIC 0.1 μ F	25V
C103	1-124-778-00	ELECT 22 μ F 20%	6.3V	C152	1-163-139-00	CERAMIC 820PF 5%	50V
C104	1-163-038-00	CERAMIC 0.1 μ F	25V	C153	1-126-217-11	ELECT 15 μ F 20%	10V
C105	1-164-346-11	CERAMIC 1 μ F	16V	C154	1-163-038-00	CERAMIC 0.1 μ F	25V
C106	1-164-346-11	CERAMIC 1 μ F	16V	C155	1-163-038-00	CERAMIC 0.1 μ F	25V
C107	1-163-275-11	CERAMIC 0.001 μ F 5%	50V	C156	1-163-038-00	CERAMIC 0.1 μ F	25V
C108	1-126-217-11	ELECT 15 μ F 20%	10V	C157	1-126-217-11	ELECT 15 μ F 20%	10V
C109	1-163-038-00	CERAMIC 0.1 μ F	25V	C158	1-164-346-11	CERAMIC 1 μ F	16V
C110	1-163-110-00	CERAMIC 51PF 5%	50V	C159	1-163-038-00	CERAMIC 0.1 μ F	25V
C111	1-163-097-00	CERAMIC 15PF 5%	50V	C160	1-128-065-11	ELECT 68 μ F 20%	10V
C112	1-163-253-11	CERAMIC 120PF 5%	50V	C161	1-126-206-11	ELECT 100 μ F 20%	6.3V
C113	1-164-346-11	CERAMIC 1 μ F	16V	C162	1-163-038-00	CERAMIC 0.1 μ F	25V
C114	1-163-141-00	CERAMIC 0.001 μ F 5%	50V	C163	1-128-065-11	ELECT 68 μ F 20%	10V
C115	1-124-778-00	ELECT 22 μ F 20%	6.3V	C164	1-126-206-11	ELECT 100 μ F 20%	6.3V
C116	1-163-038-00	CERAMIC 0.1 μ F	25V	C165	1-163-038-00	CERAMIC 0.1 μ F	25V
C117	1-126-217-11	ELECT 15 μ F 20%	10V	C166	1-126-217-11	ELECT 15 μ F 20%	10V
C118	1-163-038-00	CERAMIC 0.1 μ F	25V	C167	1-163-241-11	CERAMIC 39PF 5%	50V
C119	1-163-038-00	CERAMIC 0.1 μ F	25V	C168	1-163-243-11	CERAMIC 47PF 5%	50V
C120	1-163-141-00	CERAMIC 0.001 μ F 5%	50V	C173	1-163-038-00	CERAMIC 0.1 μ F	25V
C121	1-163-141-00	CERAMIC 0.001 μ F 5%	50V	C175	1-163-038-00	CERAMIC 0.1 μ F	25V
C122	1-163-141-00	CERAMIC 0.001 μ F 5%	50V	C176	1-126-217-11	ELECT 15 μ F 20%	10V
C123	1-163-239-11	CERAMIC 33PF 5%	50V	C177	1-163-038-00	CERAMIC 0.1 μ F	25V
C124	1-163-235-11	CERAMIC 22PF 5%	50V	C180	1-163-141-00	CERAMIC 0.001 μ F 5%	50V
C125	1-164-004-11	CERAMIC 0.1 μ F 10%	25V	C181	1-163-235-11	CERAMIC 22PF 5%	50V
C126	1-163-141-00	CERAMIC 0.001 μ F 5%	50V	C182	1-163-038-00	CERAMIC 0.1 μ F	25V
C127	1-163-038-00	CERAMIC 0.1 μ F	25V	C183	1-163-038-00	CERAMIC 0.1 μ F	25V
C128	1-163-275-11	CERAMIC 0.001 μ F 5%	50V	C184	1-163-257-11	CERAMIC 180PF 5%	50V
C129	1-163-275-11	CERAMIC 0.001 μ F 5%	50V	C185	1-163-038-00	CERAMIC 0.1 μ F	25V
C131	1-126-217-11	ELECT 15 μ F 20%	10V	C187	1-163-038-00	CERAMIC 0.1 μ F	25V
C132	1-163-038-00	CERAMIC 0.1 μ F	25V	C188	1-164-232-11	CERAMIC 0.01 μ F 10%	50V
C133	1-163-141-00	CERAMIC 0.001 μ F 5%	50V	C190	1-163-017-00	CERAMIC 0.0047 μ F 10%	50V
C134	1-165-320-11	CERAMIC 0.47 μ F 10%	16V	C191	1-163-137-00	CERAMIC 680PF 5%	50V
C135	1-126-217-11	ELECT 15 μ F 20%	10V	C192	1-164-232-11	CERAMIC 0.01 μ F 10%	50V
C136	1-163-038-00	CERAMIC 0.1 μ F	25V	C193	1-126-217-11	ELECT 15 μ F 20%	10V
C137	1-164-182-11	CERAMIC 0.0033 μ F 10%	50V	C194	1-164-232-11	CERAMIC 0.01 μ F 10%	50V
C138	1-163-251-11	CERAMIC 100PF 5%	50V	C195	1-126-217-11	ELECT 15 μ F 20%	10V
C139	1-163-038-00	CERAMIC 0.1 μ F	25V	C196	1-164-232-11	CERAMIC 0.01 μ F 10%	50V
C140	1-163-038-00	CERAMIC 0.1 μ F	25V	C197	1-164-232-11	CERAMIC 0.01 μ F 10%	50V
C141	1-164-004-11	CERAMIC 0.1 μ F 10%	25V	C199	1-126-217-11	ELECT 15 μ F 20%	10V
C143	1-126-217-11	ELECT 15 μ F 20%	10V	C200	1-126-217-11	ELECT 15 μ F 20%	10V
C144	1-163-141-00	CERAMIC 0.001 μ F 5%	50V	C201	1-163-141-00	CERAMIC 0.001 μ F 5%	50V
C145	1-164-232-11	CERAMIC 0.01 μ F 10%	50V	C202	1-126-603-11	ELECT 4.7 μ F 20%	35V
C146	1-164-232-11	CERAMIC 0.01 μ F 10%	50V	C203	1-164-232-11	CERAMIC 0.01 μ F 10%	50V
C147	1-164-004-11	CERAMIC 0.1 μ F 10%	25V	C204	1-163-089-00	CERAMIC 6PF	50V
				C205	1-163-038-00	CERAMIC 0.1 μ F	25V
				C206	1-164-005-11	CERAMIC 0.47 μ F	25V
				C207	1-163-038-00	CERAMIC 0.1 μ F	25V

VA-76

Ref.No	Part No.	Description			Remark	Ref.No	Part No.	Description			Remark
C209	1-126-217-11	ELECT	15uF	20%	10V	C341	1-126-217-11	ELECT	15uF	20%	10V
C210	1-164-005-11	CERAMIC	0.47uF		25V	C342	1-163-038-00	CERAMIC	0.1uF		25V
C211	1-164-005-11	CERAMIC	0.47uF		25V	C343	1-126-217-11	ELECT	15uF	20%	10V
C212	1-163-038-00	CERAMIC	0.1uF		25V	C344	1-163-038-00	CERAMIC	0.1uF		25V
C213	1-126-217-11	ELECT	15uF	20%	10V	C345	1-126-217-11	ELECT	15uF	20%	10V
C214	1-163-038-00	CERAMIC	0.1uF		25V	C346	1-163-038-00	CERAMIC	0.1uF		25V
C215	1-164-005-11	CERAMIC	0.47uF		25V	C347	1-163-227-11	CERAMIC	10PF		50V
C216	1-126-193-11	ELECT	1uF	20%	50V	C348	1-164-004-11	CERAMIC	0.1uF	10%	25V
C217	1-164-005-11	CERAMIC	0.47uF		25V	C349	1-128-065-11	ELECT	68uF	20%	10V
C218	1-163-235-11	CERAMIC	22PF	5%	50V	C350	1-163-038-00	CERAMIC	0.1uF		25V
C220	1-164-005-11	CERAMIC	0.47uF		25V	C351	1-126-217-11	ELECT	15uF	20%	10V
C221	1-164-005-11	CERAMIC	0.47uF		25V	C352	1-163-038-00	CERAMIC	0.1uF		25V
C223	1-164-005-11	CERAMIC	0.47uF		25V	C353	1-163-809-11	CERAMIC	0.047uF	10%	25V
C224	1-164-005-11	CERAMIC	0.47uF		25V	C354	1-163-037-11	CERAMIC	0.022uF	10%	25V
C225	1-126-217-11	ELECT	15uF	20%	10V	C355	1-163-038-00	CERAMIC	0.1uF		25V
C226	1-163-038-00	CERAMIC	0.1uF		25V	C356	1-163-809-11	CERAMIC	0.047uF	10%	25V
C227	1-164-005-11	CERAMIC	0.47uF		25V	C357	1-164-489-11	CERAMIC	0.22uF	10%	16V
C228	1-163-251-11	CERAMIC	100PF	5%	50V	C358	1-164-004-11	CERAMIC	0.1uF	10%	25V
C230	1-163-038-00	CERAMIC	0.1uF		25V	C359	1-126-193-11	ELECT	1uF	20%	50V
C233	1-163-257-11	CERAMIC	180PF	5%	50V	C360	1-163-106-00	CERAMIC	36PF	5%	50V
C250	1-163-127-00	CERAMIC	270PF	5%	50V	C363	1-128-065-11	ELECT	68uF	20%	10V
C251	1-163-110-00	CERAMIC	51PF	5%	50V	C364	1-163-038-00	CERAMIC	0.1uF		25V
C252	1-126-217-11	ELECT	15uF	20%	10V	C368	1-163-038-00	CERAMIC	0.1uF		25V
C260	1-164-004-11	CERAMIC	0.1uF	10%	25V	C369	1-126-217-11	ELECT	15uF	20%	10V
C271	1-126-217-11	ELECT	15uF	20%	10V	C370	1-163-038-00	CERAMIC	0.1uF		25V
C281	1-126-207-11	ELECT	33uF	20%	4V	C371	1-163-038-00	CERAMIC	0.1uF		25V
C282	1-126-217-11	ELECT	15uF	20%	10V	C372	1-126-603-11	ELECT	4.7uF	20%	35V
C285	1-164-005-11	CERAMIC	0.47uF		25V	C373	1-163-227-11	CERAMIC	10PF		50V
C286	1-164-005-11	CERAMIC	0.47uF		25V	C374	1-164-004-11	CERAMIC	0.1uF	10%	25V
C290	1-164-005-11	CERAMIC	0.47uF		25V	C375	1-163-038-00	CERAMIC	0.1uF		25V
C291	1-164-005-11	CERAMIC	0.47uF		25V	C376	1-164-232-11	CERAMIC	0.01uF	10%	50V
C295	1-164-004-11	CERAMIC	0.1uF	10%	25V	C377	1-135-145-11	TANTAL	0.47uF	20%	25V
C301	1-126-217-11	ELECT	15uF	20%	10V	C378	1-126-217-11	ELECT	15uF	20%	10V
C302	1-163-038-00	CERAMIC	0.1uF		25V	C379	1-163-038-00	CERAMIC	0.1uF		25V
C303	1-163-077-00	CERAMIC	0.1uF	10%	25V	C380	1-126-217-11	ELECT	15uF	20%	10V
C304	1-163-077-00	CERAMIC	0.1uF	10%	25V	C381	1-163-245-11	CERAMIC	56PF	5%	50V
C305	1-163-038-00	CERAMIC	0.1uF		25V	C382	1-135-210-11	TANTAL	4.7uF	10%	10V
C306	1-164-004-11	CERAMIC	0.1uF	10%	25V	C383	1-163-038-00	CERAMIC	0.1uF		25V
C307	1-126-217-11	ELECT	15uF	20%	10V	C384	1-163-038-00	CERAMIC	0.1uF		25V
C308	1-164-346-11	CERAMIC	1uF		16V	C385	1-163-038-00	CERAMIC	0.1uF		25V
C309	1-126-217-11	ELECT	15uF	20%	10V	C386	1-164-232-11	CERAMIC	0.01uF	10%	50V
C310	1-163-038-00	CERAMIC	0.1uF		25V	C387	1-163-038-00	CERAMIC	0.1uF		25V
C311	1-163-038-00	CERAMIC	0.1uF		25V	C388	1-126-217-11	ELECT	15uF	20%	10V
C312	1-126-217-11	ELECT	15uF	20%	10V	C389	1-163-038-00	CERAMIC	0.1uF		25V
C313	1-163-038-00	CERAMIC	0.1uF		25V	C390	1-163-038-00	CERAMIC	0.1uF		25V
C314	1-126-217-11	ELECT	15uF	20%	10V	C391	1-163-229-11	CERAMIC	12PF	5%	50V
C315	1-126-217-11	ELECT	15uF	20%	10V	C393	1-163-038-00	CERAMIC	0.1uF		25V
C316	1-126-217-11	ELECT	15uF	20%	10V	C394	1-128-065-11	ELECT	68uF	20%	10V
C317	1-126-217-11	ELECT	15uF	20%	10V	C395	1-163-038-00	CERAMIC	0.1uF		25V
C318	1-126-217-11	ELECT	15uF	20%	10V	C396	1-126-217-11	ELECT	15uF	20%	10V
C319	1-163-038-00	CERAMIC	0.1uF		25V	C404	1-163-038-00	CERAMIC	0.1uF		25V
C320	1-163-038-00	CERAMIC	0.1uF		25V	C405	1-163-235-11	CERAMIC	22PF	5%	50V
C321	1-126-217-11	ELECT	15uF	20%	10V	C410	1-163-243-11	CERAMIC	47PF	5%	50V
C322	1-126-217-11	ELECT	15uF	20%	10V	C482	1-163-251-11	CERAMIC	100PF	5%	50V
C323	1-163-038-00	CERAMIC	0.1uF		25V	C501	1-126-217-11	ELECT	15uF	20%	10V
C324	1-163-038-00	CERAMIC	0.1uF		25V	C502	1-163-038-00	CERAMIC	0.1uF		25V
C325	1-163-117-00	CERAMIC	100PF	5%	50V	C503	1-163-038-00	CERAMIC	0.1uF		25V
C326	1-163-117-00	CERAMIC	100PF	5%	50V	C504	1-126-217-11	ELECT	15uF	20%	10V
C327	1-163-038-00	CERAMIC	0.1uF		25V	C505	1-163-239-11	CERAMIC	33PF	5%	50V
C335	1-126-217-11	ELECT	15uF	20%	10V	C506	1-163-239-11	CERAMIC	33PF	5%	50V
C336	1-163-038-00	CERAMIC	0.1uF		25V	C507	1-163-038-00	CERAMIC	0.1uF		25V
C337	1-163-227-11	CERAMIC	10PF		50V	C508	1-163-038-00	CERAMIC	0.1uF		25V
C338	1-164-004-11	CERAMIC	0.1uF	10%	25V	C509	1-126-217-11	ELECT	15uF	20%	10V
C339	1-126-217-11	ELECT	15uF	20%	10V	C512	1-163-038-00	CERAMIC	0.1uF		25V
C340	1-163-038-00	CERAMIC	0.1uF		25V	C513	1-164-005-11	CERAMIC	0.47uF		25V

Ref.No	Part No.	Description	Remark	Ref.No	Part No.	Description	Remark
C514	1-163-038-91	CERAMIC	0.1uF	25V	D302	8-719-820-41	DIODE 1SS302
C515	1-163-038-91	CERAMIC	0.1uF	25V	D310	8-719-820-41	DIODE 1SS302
C516	1-126-217-11	ELECT	15uF	20%	D311	8-719-820-41	DIODE 1SS302
C517	1-163-038-91	CERAMIC	0.1uF	25V	D312	8-719-820-41	DIODE 1SS302
C518	1-164-232-11	CERAMIC	0.01uF	10%	D313	8-719-820-41	DIODE 1SS302
C519	1-164-232-11	CERAMIC	0.01uF	10%	D503	8-719-820-41	DIODE 1SS302
C520	1-163-809-11	CERAMIC	0.047uF	10%	D508	8-719-820-41	DIODE 1SS302
C521	1-163-809-11	CERAMIC	0.047uF	10%	D509	8-719-820-41	DIODE 1SS302
C522	1-163-809-11	CERAMIC	0.047uF	10%	D910	8-719-025-18	DIODE 02CZ2.0-TE85L
C523	1-164-232-11	CERAMIC	0.01uF	10%	D911	8-719-025-18	DIODE 02CZ2.0-TE85L
C524	1-164-005-11	CERAMIC	0.47uF	25V	D912	8-719-025-18	DIODE 02CZ2.0-TE85L
C525	1-126-217-11	ELECT	15uF	20%			<DELAY LINE>
C526	1-126-217-11	ELECT	15uF	20%			
C527	1-163-038-00	CERAMIC	0.1uF	25V	DL301	1-406-516-11	DELAY LINE, LC (140NS) (EQ)
C528	1-163-038-00	CERAMIC	0.1uF	25V	DL302	1-239-565-11	FILTER, LOW PASS
C529	1-163-038-00	CERAMIC	0.1uF	25V			<FERRITE, BEAD>
C530	1-126-217-11	ELECT	15uF	20%			
C531	1-163-038-00	CERAMIC	0.1uF	25V	FB108	1-412-390-21	INDUCTOR CHIP OUH
C532	1-126-217-11	ELECT	15uF	20%	FB109	1-412-390-21	INDUCTOR CHIP OUH
C533	1-163-038-00	CERAMIC	0.1uF	25V	FB305	1-412-390-21	INDUCTOR CHIP OUH
C534	1-126-217-11	ELECT	15uF	20%	FB306	1-412-390-21	INDUCTOR CHIP OUH
C535	1-163-038-00	CERAMIC	0.1uF	25V	FB307	1-412-390-21	INDUCTOR CHIP OUH
C536	1-164-005-11	CERAMIC	0.47uF	25V	FB308	1-412-390-21	INDUCTOR CHIP OUH
C537	1-164-005-11	CERAMIC	0.47uF	25V	FB309	1-412-390-21	INDUCTOR CHIP OUH
C538	1-126-217-11	ELECT	15uF	20%	FB310	1-412-390-21	INDUCTOR CHIP OUH
C539	1-164-232-11	CERAMIC	0.01uF	10%	FB920	1-412-390-21	INDUCTOR CHIP OUH
C540	1-164-232-11	CERAMIC	0.01uF	10%	FB921	1-412-390-21	INDUCTOR CHIP OUH
C541	1-164-232-11	CERAMIC	0.01uF	10%			
C543	1-163-235-11	CERAMIC	22PF	5%	FB922	1-412-390-21	INDUCTOR CHIP OUH
C544	1-164-004-11	CERAMIC	0.1uF	10%			<FILTER>
C545	1-126-217-11	ELECT	15uF	20%			
C546	1-163-038-00	CERAMIC	0.1uF	25V	FL101	1-239-492-11	FILTER, EMI
C547	1-163-038-00	CERAMIC	0.1uF	25V	FL201	1-239-563-11	FILTER, LOW PASS
C570	1-163-038-00	CERAMIC	0.1uF	25V	FL202	1-236-191-11	FILTER, BAND PASS
C571	1-126-217-11	ELECT	15uF	20%	FL203	1-239-564-11	FILTER, LOW PASS
C572	1-126-217-11	ELECT	15uF	20%	FL304	1-406-515-11	DELAY LINE, LC
C611	1-126-217-11	ELECT	15uF	20%			
C651	1-128-065-11	ELECT	68uF	20%	FL501	1-239-563-11	FILTER, LOW PASS
C901	1-163-239-11	CERAMIC	33PF	5%	FL502	1-239-563-11	FILTER, LOW PASS
C902	1-163-239-11	CERAMIC	33PF	5%	FL503	1-239-563-11	FILTER, LOW PASS
C903	1-163-239-11	CERAMIC	33PF	5%	FL504	1-239-564-11	FILTER, LOW PASS
C910	1-135-210-11	TANTAL	4.7uF	10%	FL505	1-236-191-11	FILTER, BAND PASS
C911	1-135-210-11	TANTAL	4.7uF	10%			<IC>
C950	1-163-127-00	CERAMIC	270PF	5%	IC101	8-759-079-66	IC TC74VHC123AFS
C951	1-163-239-11	CERAMIC	33PF	5%	IC102	8-759-105-49	IC UPC319G2
					IC103	8-759-085-67	IC UPC339G2
					IC104	8-759-996-43	IC RC4558PS
					IC106	8-759-710-12	IC NJM2230M
					IC107	8-752-326-08	IC CXD1159Q
					IC108	8-759-907-81	IC SN74LS221NS
					IC109	8-759-242-70	IC TC7WU04F
					IC110	8-759-907-81	IC SN74LS221NS
					IC111	8-759-981-48	IC TL082CPS
					IC112	8-759-011-65	IC MC74HC4053F
					IC113	8-759-157-22	IC PQ06TZ1U
					IC114	8-759-157-17	IC PQ05SZ1U
					IC119	8-759-097-87	IC MB621948
					IC120	8-759-711-62	IC NJM2240M
					IC121	8-752-352-20	IC CXD2023Q
					IC122	8-759-710-86	IC NJM2233BM
					IC123	8-759-710-07	IC NJM2234M
					IC125	8-759-710-86	IC NJM2233BM
					IC126	8-759-242-64	IC TC4W53F
D101	8-719-002-81	DIODE 1T363A					
D109	8-719-820-41	DIODE 1SS302					
D110	8-719-820-41	DIODE 1SS302					
D125	8-719-024-82	DIODE 1SS300					
D301	8-719-820-41	DIODE 1SS302					

VA-76

Ref.No	Part No.	Description	Remark	Ref.No	Part No.	Description	Remark
IC128	8-759-242-72	IC TC7W00F		Q120	8-729-230-63	TRANSISTOR 2SC4116YG-TE85L	
IC130	8-752-326-08	IC CXD1159Q		Q121	8-729-230-63	TRANSISTOR 2SC4116YG-TE85L	
IC150	8-759-242-76	IC TC7W08F		Q122	8-729-230-63	TRANSISTOR 2SC4116YG-TE85L	
IC301	8-752-054-80	IC CXA1521M		Q123	8-729-014-86	TRANSISTOR 2SC4207-YGRTE85L	
IC302	8-759-011-65	IC MC74HC4053F		Q124	8-729-402-84	TRANSISTOR XN4601	
IC303	8-759-060-00	IC LM324DR		Q125	8-729-230-63	TRANSISTOR 2SC4116YG-TE85L	
IC304	8-759-060-00	IC LM324DR		Q126	8-729-402-84	TRANSISTOR XN4601	
IC306	8-759-105-49	IC UPC319GZ		Q301	8-729-014-86	TRANSISTOR 2SC4207-YGRTE85L	
IC307	8-759-635-27	IC M62352GP		Q302	8-729-230-63	TRANSISTOR 2SC4116YG-TE85L	
IC308	8-759-635-27	IC M62352GP		Q303	8-729-402-84	TRANSISTOR XN4601	
IC309	8-759-278-57	IC AK6420HF		Q304	8-729-402-84	TRANSISTOR XN4601	
IC311	8-752-058-96	IC CXA1585Q		Q305	8-729-230-63	TRANSISTOR 2SC4116YG-TE85L	
IC312	8-759-929-26	IC TL431CPS		Q306	8-729-230-60	TRANSISTOR 2SA1586YG	
IC313	8-759-745-64	IC NJM4560M		Q307	8-729-232-66	TRANSISTOR 2SA1618	
IC314	8-759-060-00	IC LM324DR		Q308	8-729-230-63	TRANSISTOR 2SC4116YG-TE85L	
IC320	8-759-745-64	IC NJM4560M		Q309	8-729-402-81	TRANSISTOR XN4501	
IC501	8-759-011-65	IC MC74HC4053F		Q310	8-729-230-60	TRANSISTOR 2SA1586YG	
IC504	8-759-254-98	IC M50555-218FP-TE2		Q311	8-729-402-81	TRANSISTOR XN4501	
IC506	8-752-033-07	IC CXA1145M		Q316	8-729-230-63	TRANSISTOR 2SC4116YG-TE85L	
IC507	8-752-053-21	IC CXA1211M		Q320	8-729-230-63	TRANSISTOR 2SC4116YG-TE85L	
IC508	8-759-710-86	IC NJM2233BM		Q321	8-729-014-86	TRANSISTOR 2SC4207-YGRTE85L	
IC511	8-752-053-21	IC CXA1211M		Q322	8-729-230-63	TRANSISTOR 2SC4116YG-TE85L	
		<JACK>		Q323	8-729-230-63	TRANSISTOR 2SC4116YG-TE85L	
J101	1-565-276-21	JACK, ULTRA SMALL 1P		Q324	8-729-014-86	TRANSISTOR 2SC4207-YGRTE85L	
		<INDUCTOR>		Q326	8-729-230-63	TRANSISTOR 2SC4116YG-TE85L	
L101	1-410-389-31	INDUCTOR CHIP 47UH		Q328	8-729-230-63	TRANSISTOR 2SC4116YG-TE85L	
L102	1-410-388-31	INDUCTOR CHIP 39UH		Q329	8-729-230-63	TRANSISTOR 2SC4116YG-TE85L	
L103	1-412-137-11	INDUCTOR 10UH		Q330	8-729-014-86	TRANSISTOR 2SC4207-YGRTE85L	
L110	1-410-200-31	INDUCTOR CHIP 4.7UH		Q334	8-729-230-63	TRANSISTOR 2SC4116YG-TE85L	
L120	1-410-385-11	INDUCTOR CHIP 22UH		Q335	8-729-014-86	TRANSISTOR 2SC4207-YGRTE85L	
L130	1-410-385-11	INDUCTOR CHIP 22UH		Q336	8-729-230-60	TRANSISTOR 2SA1586YG-TE85L	
L301	1-410-377-31	INDUCTOR CHIP 4.7UH		Q350	8-729-230-63	TRANSISTOR 2SC4116YG-TE85L	
L302	1-410-389-31	INDUCTOR CHIP 47UH		Q360	8-729-402-84	TRANSISTOR XN4601	
L303	1-410-388-31	INDUCTOR CHIP 39UH		Q361	8-729-230-63	TRANSISTOR 2SC4116YG-TE85L	
L350	1-410-377-31	INDUCTOR CHIP 4.7UH		Q501	8-729-230-63	TRANSISTOR 2SC4116YG-TE85L	
L501	1-410-384-31	INDUCTOR CHIP 18UH		Q502	8-729-230-63	TRANSISTOR 2SC4116YG-TE85L	
L901	1-410-730-11	INDUCTOR CHIP 0.12UH		Q503	8-729-230-60	TRANSISTOR 2SA1586YG	
L902	1-410-730-11	INDUCTOR CHIP 0.12UH		Q504	8-729-230-60	TRANSISTOR 2SA1586YG	
L903	1-410-730-11	INDUCTOR CHIP 0.12UH		Q505	8-729-230-63	TRANSISTOR 2SC4116YG-TE85L	
L904	1-412-188-11	INDUCTOR 22UH		Q506	8-729-230-63	TRANSISTOR 2SC4116YG-TE85L	
		<FILTER>		Q507	8-729-232-66	TRANSISTOR 2SA1618	
LF101	1-424-090-11	COIL, LINE FILTER		Q508	8-729-230-63	TRANSISTOR 2SC4116YG-TE85L	
LF102	1-424-090-11	COIL, LINE FILTER		Q509	8-729-232-66	TRANSISTOR 2SA1618	
LF106	1-424-090-11	COIL, LINE FILTER		Q510	8-729-232-66	TRANSISTOR 2SA1618	
		<TRANSISTOR>		Q511	8-729-230-63	TRANSISTOR 2SC4116YG-TE85L	
Q101	8-729-230-60	TRANSISTOR 2SA1586YG		Q512	8-729-230-60	TRANSISTOR 2SA1586YG	
Q102	8-729-230-60	TRANSISTOR 2SA1586YG		Q513	8-729-230-63	TRANSISTOR 2SC4116YG-TE85L	
Q103	8-729-230-63	TRANSISTOR 2SC4116YG-TE85L		Q514	8-729-230-63	TRANSISTOR 2SC4116YG-TE85L	
Q104	8-729-230-63	TRANSISTOR 2SC4116YG-TE85L		Q515	8-729-230-63	TRANSISTOR 2SC4116YG-TE85L	
Q106	8-729-120-28	TRANSISTOR 2SC1623-L5L6		Q516	8-729-230-63	TRANSISTOR 2SC4116YG-TE85L	
Q108	8-729-230-63	TRANSISTOR 2SC4116YG-TE85L		Q517	8-729-230-63	TRANSISTOR 2SC4116YG-TE85L	
Q109	8-729-230-63	TRANSISTOR 2SC4116YG-TE85L		Q518	8-729-230-63	TRANSISTOR 2SC4116YG-TE85L	
Q110	8-729-230-63	TRANSISTOR 2SC4116YG-TE85L		Q519	8-729-230-63	TRANSISTOR 2SC4116YG-TE85L	
Q111	8-729-230-63	TRANSISTOR 2SC4116YG-TE85L		Q520	8-729-230-63	TRANSISTOR 2SC4116YG-TE85L	
Q112	8-729-230-60	TRANSISTOR 2SA1586YG		Q521	8-729-230-63	TRANSISTOR 2SC4116YG-TE85L	
Q113	8-729-402-87	TRANSISTOR XN2401		Q522	8-729-230-63	TRANSISTOR 2SC4116YG-TE85L	
Q116	8-729-230-63	TRANSISTOR 2SC4116YG-TE85L		Q523	8-729-230-63	TRANSISTOR 2SC4116YG-TE85L	
Q117	8-729-230-63	TRANSISTOR 2SC4116YG-TE85L		Q525	8-729-230-63	TRANSISTOR 2SC4116YG-TE85L	
Q118	8-729-402-84	TRANSISTOR XN4601		Q526	8-729-230-63	TRANSISTOR 2SC4116YG-TE85L	
Q119	8-729-230-63	TRANSISTOR 2SC4116YG-TE85L		Q527	8-729-230-63	TRANSISTOR 2SC4116YG-TE85L	
				Q528	8-729-014-86	TRANSISTOR 2SC4207-YGRTE85L	
				Q529	8-729-014-86	TRANSISTOR 2SC4207-YGRTE85L	
				Q530	8-729-230-60	TRANSISTOR 2SA1586YG	
				Q531	8-729-230-60	TRANSISTOR 2SA1586YG	
				Q532	8-729-230-60	TRANSISTOR 2SA1586YG	

Ref.No	Part No.	Description	Remark	Ref.No	Part No.	Description	Remark
Q540	8-729-014-86	TRANSISTOR 2SC4207-YGRTE85L		R164	1-216-073-00	METAL 10K 5%	1/10W
Q901	8-729-230-60	TRANSISTOR 2SA1586YG		R165	1-216-065-00	METAL 4.7K 5%	1/10W
Q902	8-729-230-63	TRANSISTOR 2SC4116YG-TE85L		R166	1-216-047-00	METAL 820 5%	1/10W
Q910	8-729-230-60	TRANSISTOR 2SA1586YG		R167	1-216-027-00	METAL 120 5%	1/10W
<REGISTOR>				R168	1-216-073-00	METAL 10K 5%	1/10W
R101	1-216-051-00	METAL 1.2K 5%	1/10W	R169	1-216-069-00	METAL 6.8K 5%	1/10W
R102	1-216-053-00	METAL 1.5K 5%	1/10W	R171	1-216-065-00	METAL 4.7K 5%	1/10W
R103	1-216-053-00	METAL 1.5K 5%	1/10W	R172	1-216-057-00	METAL 2.2K 5%	1/10W
R105	1-216-057-00	METAL 2.2K 5%	1/10W	R173	1-216-055-00	METAL 1.8K 5%	1/10W
R106	1-216-057-00	METAL 2.2K 5%	1/10W	R177	1-216-049-00	METAL 1K 5%	1/10W
R107	1-216-065-00	METAL 4.7K 5%	1/10W	R178	1-216-049-00	METAL 1K 5%	1/10W
R108	1-216-057-00	METAL 2.2K 5%	1/10W	R179	1-216-295-11	METAL 0 5%	1/10W
R109	1-216-057-00	METAL 2.2K 5%	1/10W	R180	1-216-049-00	METAL 1K 5%	1/10W
R110	1-216-053-00	METAL 1.5K 5%	1/10W	R181	1-216-070-00	METAL 7.5K 5%	1/10W
R111	1-216-075-00	METAL 12K 5%	1/10W	R182	1-216-049-00	METAL 1K 5%	1/10W
R112	1-216-001-00	METAL 10 5%	1/10W	R185	1-216-061-00	METAL 3.3K 5%	1/10W
R113	1-216-057-00	METAL 2.2K 5%	1/10W	R186	1-216-053-00	METAL 1.5K 5%	1/10W
R114	1-216-065-00	METAL 4.7K 5%	1/10W	R187	1-216-033-00	METAL 220 5%	1/10W
R115	1-216-057-00	METAL 2.2K 5%	1/10W	R188	1-216-057-00	METAL 2.2K 5%	1/10W
R116	1-216-081-00	METAL 22K 5%	1/10W	R190	1-216-057-00	METAL 2.2K 5%	1/10W
R117	1-216-049-00	METAL 1K 5%	1/10W	R191	1-216-057-00	METAL 2.2K 5%	1/10W
R118	1-216-075-00	METAL 12K 5%	1/10W	R192	1-216-049-00	METAL 1K 5%	1/10W
R119	1-216-073-00	METAL 10K 5%	1/10W	R194	1-216-295-11	METAL 0 5%	1/10W
R120	1-216-075-00	METAL 12K 5%	1/10W	R195	1-216-049-00	METAL 1K 5%	1/10W
R121	1-216-035-00	METAL 270 5%	1/10W	R196	1-216-049-00	METAL 1K 5%	1/10W
R123	1-216-049-00	METAL 1K 5%	1/10W	R197	1-216-049-00	METAL 1K 5%	1/10W
R124	1-216-065-00	METAL 4.7K 5%	1/10W	R198	1-216-049-00	METAL 1K 5%	1/10W
R125	1-216-033-00	METAL 220 5%	1/10W	R200	1-216-049-00	METAL 1K 5%	1/10W
R126	1-216-295-11	METAL 0 5%	1/10W	R208	1-216-064-00	METAL 4.3K 5%	1/10W
R127	1-216-037-00	METAL 330 5%	1/10W	R209	1-216-039-00	METAL 390 5%	1/10W
R128	1-216-085-00	METAL 33K 5%	1/10W	R210	1-216-041-00	METAL 470 5%	1/10W
R129	1-216-069-00	METAL 6.8K 5%	1/10W	R211	1-216-057-00	METAL 2.2K 5%	1/10W
R130	1-216-083-00	METAL 27K 5%	1/10W	R212	1-216-073-00	METAL 10K 5%	1/10W
R131	1-216-073-00	METAL 10K 5%	1/10W	R213	1-216-083-00	METAL 27K 5%	1/10W
R132	1-216-073-00	METAL 10K 5%	1/10W	R214	1-216-057-00	METAL 2.2K 5%	1/10W
R133	1-216-097-00	METAL 100K 5%	1/10W	R216	1-216-041-00	METAL 470 5%	1/10W
R134	1-216-049-91	METAL 1K 5%	1/10W	R217	1-216-032-00	METAL 200 5%	1/10W
R135	1-216-033-00	METAL 220 5%	1/10W	R218	1-216-053-00	METAL 1.5K 5%	1/10W
R136	1-216-091-00	METAL 56K 5%	1/10W	R219	1-216-053-00	METAL 1.5K 5%	1/10W
R137	1-216-053-00	METAL 1.5K 5%	1/10W	R220	1-216-049-00	METAL 1K 5%	1/10W
R138	1-216-051-00	METAL 1.2K 5%	1/10W	R221	1-216-049-00	METAL 1K 5%	1/10W
R139	1-216-053-00	METAL 1.5K 5%	1/10W	R222	1-216-073-00	METAL 10K 5%	1/10W
R141	1-216-069-00	METAL 6.8K 5%	1/10W	R223	1-216-041-00	METAL 470 5%	1/10W
R142	1-216-081-00	METAL 22K 5%	1/10W	R224	1-216-049-00	METAL 1K 5%	1/10W
R143	1-216-081-00	METAL 22K 5%	1/10W	R225	1-216-053-00	METAL 1.5K 5%	1/10W
R144	1-216-105-00	METAL 220K 5%	1/10W	R226	1-216-295-11	METAL 0 5%	1/10W
R145	1-216-067-00	METAL 5.6K 5%	1/10W	R227	1-216-053-00	METAL 1.5K 5%	1/10W
R146	1-216-055-00	METAL 1.8K 5%	1/10W	R228	1-216-049-00	METAL 1K 5%	1/10W
R147	1-216-057-00	METAL 2.2K 5%	1/10W	R229	1-216-053-00	METAL 1.5K 5%	1/10W
R148	1-216-057-00	METAL 2.2K 5%	1/10W	R230	1-216-049-00	METAL 1K 5%	1/10W
R149	1-216-063-00	METAL 3.9K 5%	1/10W	R231	1-216-051-00	METAL 1.2K 5%	1/10W
R150	1-216-057-00	METAL 2.2K 5%	1/10W	R232	1-216-041-00	METAL 470 5%	1/10W
R151	1-216-043-00	METAL 560 5%	1/10W	R233	1-216-061-00	METAL 3.3K 5%	1/10W
R152	1-216-031-00	METAL 180 5%	1/10W	R235	1-216-053-00	METAL 1.5K 5%	1/10W
R153	1-216-043-91	METAL 560 5%	1/10W	R236	1-216-053-00	METAL 1.5K 5%	1/10W
R154	1-216-057-00	METAL 2.2K 5%	1/10W	R237	1-216-049-00	METAL 1K 5%	1/10W
R155	1-216-093-00	METAL 68K 5%	1/10W	R238	1-216-049-00	METAL 1K 5%	1/10W
R156	1-216-021-00	METAL 68 5%	1/10W	R239	1-216-033-00	METAL 220 5%	1/10W
R157	1-216-057-00	METAL 2.2K 5%	1/10W	R240	1-216-061-00	METAL 3.3K 5%	1/10W
R158	1-216-061-00	METAL 3.3K 5%	1/10W	R241	1-216-053-00	METAL 1.5K 5%	1/10W
R159	1-216-057-00	METAL 2.2K 5%	1/10W	R245	1-216-105-00	METAL 220K 5%	1/10W
R160	1-216-065-00	METAL 4.7K 5%	1/10W	R251	1-216-295-11	METAL 0 5%	1/10W
R161	1-216-069-00	METAL 6.8K 5%	1/10W	R255	1-216-041-00	METAL 470 5%	1/10W
R162	1-216-665-11	METAL 3.9K 0.50%	1/10W	R259	1-216-295-11	METAL 0 5%	1/10W
R163	1-216-049-00	METAL 1K 5%	1/10W	R260	1-216-057-00	METAL 2.2K 5%	1/10W

VA-76

Ref.No	Part No.	Description			Remark	Ref.No	Part No.	Description			Remark
R268	1-216-295-11	METAL	0	5%	1/10W	R353	1-216-089-00	METAL	47K	5%	1/10W
R280	1-216-061-00	METAL	3.3K	5%	1/10W	R354	1-216-073-00	METAL	10K	5%	1/10W
R281	1-216-022-00	METAL	75	5%	1/10W	R355	1-216-089-00	METAL	47K	5%	1/10W
R282	1-216-032-00	METAL	200	5%	1/10W	R356	1-216-073-00	METAL	10K	5%	1/10W
R283	1-216-053-00	METAL	1.5K	5%	1/10W	R357	1-216-057-00	METAL	2.2K	5%	1/10W
R284	1-216-689-11	METAL	39K	5%	1/10W	R360	1-216-057-00	METAL	2.2K	5%	1/10W
R285	1-216-053-00	METAL	1.5K	5%	1/10W	R367	1-216-047-00	METAL	820	5%	1/10W
R288	1-216-043-00	METAL	560	5%	1/10W	R370	1-216-041-00	METAL	470	5%	1/10W
R289	1-216-057-00	METAL	2.2K	5%	1/10W	R371	1-216-057-00	METAL	2.2K	5%	1/10W
R290	1-216-045-00	METAL	680	5%	1/10W	R376	1-216-053-00	METAL	1.5K	5%	1/10W
R291	1-216-045-00	METAL	680	5%	1/10W	R378	1-216-119-00	METAL	820K	5%	1/10W
R292	1-216-031-00	METAL	180	5%	1/10W	R379	1-216-295-11	METAL	0	5%	1/10W
R293	1-216-057-00	METAL	2.2K	5%	1/10W	R380	1-216-033-00	METAL	220	5%	1/10W
R294	1-216-065-00	METAL	4.7K	5%	1/10W	R381	1-216-295-11	METAL	0	5%	1/10W
R301	1-216-053-00	METAL	1.5K	5%	1/10W	R393	1-216-043-00	METAL	560	5%	1/10W
R302	1-216-053-00	METAL	1.5K	5%	1/10W	R394	1-216-057-00	METAL	2.2K	5%	1/10W
R303	1-216-053-00	METAL	1.5K	5%	1/10W	R395	1-216-053-00	METAL	1.5K	5%	1/10W
R304	1-216-033-00	METAL	220	5%	1/10W	R397	1-216-049-00	METAL	1K	5%	1/10W
R305	1-216-033-00	METAL	220	5%	1/10W	R399	1-216-049-00	METAL	1K	5%	1/10W
R306	1-216-057-00	METAL	2.2K	5%	1/10W	R400	1-216-033-00	METAL	220	5%	1/10W
R307	1-216-057-00	METAL	2.2K	5%	1/10W	R401	1-216-053-00	METAL	1.5K	5%	1/10W
R308	1-216-061-00	METAL	3.3K	5%	1/10W	R402	1-216-053-00	METAL	1.5K	5%	1/10W
R309	1-216-065-00	METAL	4.7K	5%	1/10W	R403	1-216-053-00	METAL	1.5K	5%	1/10W
R310	1-216-065-00	METAL	4.7K	5%	1/10W	R406	1-216-033-00	METAL	220	5%	1/10W
R311	1-216-061-00	METAL	3.3K	5%	1/10W	R407	1-216-043-00	METAL	560	5%	1/10W
R313	1-216-033-00	METAL	220	5%	1/10W	R408	1-216-057-00	METAL	2.2K	5%	1/10W
R314	1-216-033-00	METAL	220	5%	1/10W	R409	1-216-053-00	METAL	1.5K	5%	1/10W
R315	1-216-089-00	METAL	47K	5%	1/10W	R410	1-216-049-00	METAL	1K	5%	1/10W
R316	1-216-033-00	METAL	220	5%	1/10W	R413	1-216-049-00	METAL	1K	5%	1/10W
R317	1-216-033-00	METAL	220	5%	1/10W	R414	1-216-033-00	METAL	220	5%	1/10W
R318	1-216-033-00	METAL	220	5%	1/10W	R415	1-216-114-00	METAL	510K	5%	1/10W
R319	1-216-073-00	METAL	10K	5%	1/10W	R416	1-216-053-00	METAL	1.5K	5%	1/10W
R320	1-216-033-00	METAL	220	5%	1/10W	R417	1-216-053-00	METAL	1.5K	5%	1/10W
R321	1-216-033-00	METAL	220	5%	1/10W	R418	1-216-049-00	METAL	1K	5%	1/10W
R322	1-216-073-00	METAL	10K	5%	1/10W	R419	1-216-051-00	METAL	1.2K	5%	1/10W
R323	1-216-073-00	METAL	10K	5%	1/10W	R420	1-208-789-11	METAL	2K	0.50%	1/10W
R324	1-216-033-00	METAL	220	5%	1/10W	R422	1-216-041-00	METAL	470	5%	1/10W
R325	1-216-073-00	METAL	10K	5%	1/10W	R424	1-216-033-00	METAL	220	5%	1/10W
R326	1-216-057-00	METAL	2.2K	5%	1/10W	R425	1-216-061-00	METAL	3.3K	5%	1/10W
R327	1-216-077-00	METAL	15K	5%	1/10W	R429	1-216-043-00	METAL	560	5%	1/10W
R328	1-216-033-00	METAL	220	5%	1/10W	R430	1-216-057-00	METAL	2.2K	5%	1/10W
R329	1-216-033-00	METAL	220	5%	1/10W	R432	1-216-057-00	METAL	2.2K	5%	1/10W
R330	1-216-057-00	METAL	2.2K	5%	1/10W	R433	1-216-053-00	METAL	1.5K	5%	1/10W
R331	1-216-033-00	METAL	220	5%	1/10W	R434	1-216-075-00	METAL	12K	5%	1/10W
R332	1-216-053-00	METAL	1.5K	5%	1/10W	R435	1-216-053-00	METAL	1.5K	5%	1/10W
R333	1-216-057-00	METAL	2.2K	5%	1/10W	R436	1-216-049-00	METAL	1K	5%	1/10W
R334	1-216-053-00	METAL	1.5K	5%	1/10W	R437	1-216-049-00	METAL	1K	5%	1/10W
R335	1-216-053-00	METAL	1.5K	5%	1/10W	R439	1-216-069-00	METAL	6.8K	5%	1/10W
R336	1-216-033-00	METAL	220	5%	1/10W	R441	1-216-049-00	METAL	1K	5%	1/10W
R337	1-216-073-00	METAL	10K	5%	1/10W	R442	1-216-033-00	METAL	220	5%	1/10W
R338	1-216-033-00	METAL	220	5%	1/10W	R443	1-216-103-00	METAL	180K	5%	1/10W
R339	1-216-073-00	METAL	10K	5%	1/10W	R444	1-216-033-00	METAL	220	5%	1/10W
R340	1-216-057-00	METAL	2.2K	5%	1/10W	R445	1-216-025-00	METAL	100	5%	1/10W
R341	1-216-057-00	METAL	2.2K	5%	1/10W	R446	1-216-033-00	METAL	220	5%	1/10W
R342	1-216-045-00	METAL	680	5%	1/10W	R447	1-216-053-00	METAL	1.5K	5%	1/10W
R343	1-216-061-00	METAL	3.3K	5%	1/10W	R448	1-216-053-00	METAL	1.5K	5%	1/10W
R344	1-216-057-00	METAL	2.2K	5%	1/10W	R449	1-216-053-00	METAL	1.5K	5%	1/10W
R345	1-216-057-00	METAL	2.2K	5%	1/10W	R450	1-216-049-00	METAL	1K	5%	1/10W
R346	1-216-117-00	METAL	680K	5%	1/10W	R451	1-216-049-00	METAL	1K	5%	1/10W
R347	1-216-073-00	METAL	10K	5%	1/10W	R452	1-216-049-00	METAL	1K	5%	1/10W
R348	1-216-053-00	METAL	1.5K	5%	1/10W	R453	1-216-033-00	METAL	220	5%	1/10W
R349	1-216-065-00	METAL	4.7K	5%	1/10W	R454	1-216-295-11	METAL	0	5%	1/10W
R350	1-216-065-00	METAL	4.7K	5%	1/10W	R455	1-216-081-00	METAL	22K	5%	1/10W
R351	1-216-041-00	METAL	470	5%	1/10W	R456	1-216-081-00	METAL	22K	5%	1/10W
R352	1-216-071-00	METAL	8.2K	5%	1/10W	R457	1-216-081-00	METAL	22K	5%	1/10W

VA-76

Ref.No	Part No.	Description				Remark	Ref.No	Part No.	Description				Remark
R458	1-216-061-00	METAL	3.3K	5%		1/10W	R534	1-216-033-00	METAL	220	5%		1/10W
R459	1-216-061-00	METAL	3.3K	5%		1/10W	R535	1-216-033-00	METAL	220	5%		1/10W
R460	1-216-061-00	METAL	3.3K	5%		1/10W	R536	1-216-033-00	METAL	220	5%		1/10W
R461	1-216-065-00	METAL	4.7K	5%		1/10W	R537	1-216-049-00	METAL	1K	5%		1/10W
R462	1-216-051-00	METAL	1.2K	5%		1/10W	R538	1-216-049-00	METAL	1K	5%		1/10W
							R539	1-216-685-11	METAL	27K	0.50%		1/10W
R463	1-216-059-00	METAL	2.7K	5%		1/10W	R540	1-216-049-00	METAL	1K	5%		1/10W
R464	1-216-097-00	METAL	100K	5%		1/10W	R541	1-216-049-00	METAL	1K	5%		1/10W
R465	1-216-049-00	METAL	1K	5%		1/10W	R542	1-216-049-00	METAL	1K	5%		1/10W
R466	1-216-061-00	METAL	3.3K	5%		1/10W	R543	1-216-057-00	METAL	2.2K	5%		1/10W
R467	1-216-049-00	METAL	1K	5%		1/10W							
R468	1-216-065-00	METAL	4.7K	5%		1/10W	R544	1-216-049-00	METAL	1K	5%		1/10W
R469	1-216-081-00	METAL	22K	5%		1/10W	R545	1-216-057-00	METAL	2.2K	5%		1/10W
R470	1-216-071-00	METAL	8.2K	5%		1/10W	R546	1-216-049-00	METAL	1K	5%		1/10W
R471	1-216-073-00	METAL	10K	5%		1/10W	R547	1-216-057-00	METAL	2.2K	5%		1/10W
R472	1-216-053-00	METAL	1.5K	5%		1/10W	R548	1-216-049-00	METAL	1K	5%		1/10W
							R549	1-216-049-00	METAL	1K	5%		1/10W
R473	1-216-295-11	METAL	0	5%		1/10W	R550	1-216-049-00	METAL	1K	5%		1/10W
R474	1-216-065-00	METAL	4.7K	5%		1/10W	R551	1-216-057-00	METAL	2.2K	5%		1/10W
R475	1-216-065-00	METAL	4.7K	5%		1/10W	R552	1-216-057-00	METAL	2.2K	5%		1/10W
R476	1-216-067-00	METAL	5.6K	5%		1/10W	R553	1-216-033-00	METAL	220	5%		1/10W
R477	1-216-077-00	METAL	15K	5%		1/10W							
R478	1-216-053-00	METAL	1.5K	5%		1/10W	R554	1-216-059-00	METAL	2.7K	5%		1/10W
R479	1-216-295-11	METAL	0	5%		1/10W	R555	1-216-059-00	METAL	2.7K	5%		1/10W
R480	1-216-041-00	METAL	0	5%		1/10W	R556	1-216-033-00	METAL	220	5%		1/10W
R482	1-208-775-11	METAL	510	0.50%		1/10W	R557	1-216-041-00	METAL	470	5%		1/10W
R483	1-216-033-00	METAL	220	5%		1/10W	R558	1-216-041-00	METAL	470	5%		1/10W
							R559	1-216-022-00	METAL	75	5%		1/10W
R487	1-216-051-00	METAL	1.2K	5%		1/10W	R560	1-216-041-00	METAL	470	5%		1/10W
R489	1-216-045-00	METAL	680	5%		1/10W	R561	1-216-001-00	METAL	10	5%		1/10W
R490	1-216-041-00	METAL	470	5%		1/10W	R563	1-216-001-00	METAL	10	5%		1/10W
R491	1-216-053-00	METAL	1.5K	5%		1/10W	R564	1-216-001-00	METAL	10	5%		1/10W
R493	1-216-061-00	METAL	3.3K	5%		1/10W							
R494	1-216-071-00	METAL	8.2K	5%		1/10W	R565	1-216-001-00	METAL	10	5%		1/10W
R495	1-216-073-00	METAL	10K	5%		1/10W	R566	1-216-001-00	METAL	10	5%		1/10W
R496	1-216-073-00	METAL	10K	5%		1/10W	R567	1-216-001-00	METAL	10	5%		1/10W
R497	1-216-073-00	METAL	10K	5%		1/10W	R568	1-216-051-00	METAL	1.2K	5%		1/10W
R498	1-216-073-00	METAL	10K	5%		1/10W	R569	1-216-063-00	METAL	3.9K	5%		1/10W
							R570	1-216-051-00	METAL	1.2K	5%		1/10W
R499	1-216-077-00	METAL	15K	5%		1/10W	R571	1-216-061-00	METAL	3.3K	5%		1/10W
R501	1-216-057-00	METAL	2.2K	5%		1/10W	R572	1-216-041-00	METAL	470	5%		1/10W
R502	1-216-057-00	METAL	2.2K	5%		1/10W	R573	1-216-022-00	METAL	75	5%		1/10W
R503	1-216-057-00	METAL	2.2K	5%		1/10W	R575	1-216-041-00	METAL	470	5%		1/10W
R505	1-216-033-00	METAL	220	5%		1/10W							
R506	1-216-033-00	METAL	220	5%		1/10W	R576	1-216-041-00	METAL	470	5%		1/10W
R507	1-216-033-00	METAL	220	5%		1/10W	R577	1-216-053-00	METAL	1.5K	5%		1/10W
R508	1-216-033-00	METAL	220	5%		1/10W	R578	1-216-081-00	METAL	22K	5%		1/10W
R509	1-216-057-00	METAL	2.2K	5%		1/10W	R579	1-216-081-00	METAL	22K	5%		1/10W
R510	1-216-057-00	METAL	2.2K	5%		1/10W	R581	1-216-055-00	METAL	1.8K	5%		1/10W
							R582	1-216-053-00	METAL	1.5K	5%		1/10W
R511	1-216-057-00	METAL	2.2K	5%		1/10W	R583	1-216-053-00	METAL	1.5K	5%		1/10W
R512	1-216-033-00	METAL	220	5%		1/10W	R584	1-216-059-00	METAL	2.7K	5%		1/10W
R514	1-216-057-00	METAL	2.2K	5%		1/10W	R585	1-216-053-00	METAL	1.5K	5%		1/10W
R515	1-216-033-00	METAL	220	5%		1/10W	R586	1-216-022-00	METAL	75	5%		1/10W
R516	1-216-033-00	METAL	220	5%		1/10W							
R517	1-216-033-00	METAL	220	5%		1/10W	R587	1-216-073-00	METAL	10K	5%		1/10W
R518	1-216-033-00	METAL	220	5%		1/10W	R590	1-216-037-00	METAL	330	5%		1/10W
R519	1-216-057-00	METAL	2.2K	5%		1/10W	R591	1-216-037-00	METAL	330	5%		1/10W
R520	1-216-033-00	METAL	220	5%		1/10W	R601	1-216-049-00	METAL	1K	5%		1/10W
R521	1-216-033-00	METAL	220	5%		1/10W	R602	1-216-063-00	METAL	3.9K	5%		1/10W
							R603	1-216-059-00	METAL	2.7K	5%		1/10W
R522	1-216-057-00	METAL	2.2K	5%		1/10W	R604	1-216-051-00	METAL	1.2K	5%		1/10W
R523	1-216-057-00	METAL	2.2K	5%		1/10W	R605	1-216-047-00	METAL	820	5%		1/10W
R524	1-216-057-00	METAL	2.2K	5%		1/10W	R606	1-216-041-00	METAL	470	5%		1/10W
R525	1-216-295-11	METAL	0	5%		1/10W	R607	1-216-041-00	METAL	470	5%		1/10W
R527	1-216-057-00	METAL	2.2K	5%		1/10W							
							R632	1-216-295-11	METAL	0	5%		1/10W
R528	1-216-033-00	METAL	220	5%		1/10W	R633	1-216-295-11	METAL	0	5%		1/10W
R529	1-216-057-00	METAL	2.2K	5%		1/10W	R634	1-216-295-11	METAL	0	5%		1/10W
R530	1-216-049-00	METAL	1K	5%		1/10W	R901	1-216-049-00	METAL	1K	5%		1/10W
R531	1-216-057-00	METAL	2.2K	5%		1/10W	R902	1-216-049-00	METAL	1K	5%		1/10W
R532	1-216-049-00	METAL	1K	5%		1/10W							

VA-76 VA-76(B)

Ref.No	Part No.	Description	Remark	Ref.No	Part No.	Description	Remark
R903	1-216-057-00	METAL	2.2K 5% 1/10W	C123	1-163-239-11	CERAMIC	33PF 5% 50V
R905	1-216-057-00	METAL	2.2K 5% 1/10W	C124	1-163-099-00	CERAMIC	18PF 5% 50V
R906	1-216-033-00	METAL	220 5% 1/10W	C125	1-164-004-11	CERAMIC	0.1uF 10% 25V
R907	1-216-057-00	METAL	2.2K 5% 1/10W	C126	1-163-141-00	CERAMIC	0.001uF 5% 50V
R908	1-216-057-00	METAL	2.2K 5% 1/10W	C127	1-163-038-91	CERAMIC	0.1uF 25V
R910	1-216-073-00	METAL	10K 5% 1/10W	C128	1-163-275-11	CERAMIC	0.001uF 5% 50V
R911	1-216-073-00	METAL	10K 5% 1/10W	C129	1-163-275-11	CERAMIC	0.001uF 5% 50V
R915	1-216-049-00	METAL	1K 5% 1/10W	C130	1-163-257-11	CERAMIC	180PF 5% 50V
R916	1-216-057-00	METAL	2.2K 5% 1/10W	C131	1-126-217-11	ELECT	15uF 20% 10V
R917	1-216-049-00	METAL	1K 5% 1/10W	C132	1-163-038-91	CERAMIC	0.1uF 25V
R934	1-216-041-00	METAL	470 5% 1/10W	C133	1-163-275-11	CERAMIC	0.001uF 5% 50V
R935	1-216-055-00	METAL	1.8K 5% 1/10W	C134	1-165-320-11	CERAMIC	0.47uF 10% 16V
R936	1-216-055-00	METAL	1.8K 5% 1/10W	C135	1-126-217-11	ELECT	15uF 20% 10V
R937	1-216-045-00	METAL	680 5% 1/10W	C136	1-163-038-91	CERAMIC	0.1uF 25V
R938	1-216-045-00	METAL	680 5% 1/10W	C137	1-164-182-11	CERAMIC	0.0033uF 10% 50V
R939	1-216-041-00	METAL	470 5% 1/10W	C138	1-163-251-11	CERAMIC	100PF 5% 50V
R941	1-216-295-11	METAL	0 5% 1/10W	C139	1-163-038-91	CERAMIC	0.1uF 25V
R943	1-216-295-11	METAL	0 5% 1/10W	C140	1-163-038-91	CERAMIC	0.1uF 25V
R945	1-216-295-11	METAL	0 5% 1/10W	C141	1-164-004-11	CERAMIC	0.1uF 10% 25V
R950	1-216-041-00	METAL	470 5% 1/10W	C143	1-126-217-11	ELECT	15uF 20% 10V
R951	1-216-097-00	METAL	100K 5% 1/10W	C144	1-163-275-11	CERAMIC	0.001uF 5% 50V
R952	1-216-065-00	METAL	4.7K 5% 1/10W	C145	1-164-232-11	CERAMIC	0.01uF 10% 50V
R954	1-216-065-00	METAL	4.7K 5% 1/10W	C146	1-164-232-11	CERAMIC	0.01uF 10% 50V
R955	1-216-295-11	METAL	0 5% 1/10W	C147	1-164-004-11	CERAMIC	0.1uF 10% 25V
R956	1-216-295-11	METAL	0 5% 1/10W	C148	1-163-275-11	CERAMIC	0.001uF 5% 50V
R957	1-216-295-11	METAL	0 5% 1/10W	C149	1-164-004-11	CERAMIC	0.1uF 10% 25V
R960	1-216-059-00	METAL	2.7K 5% 1/10W	C150	1-164-346-11	CERAMIC	1uF 16V
R982	1-216-049-00	METAL	1K 5% 1/10W	C151	1-163-038-91	CERAMIC	0.1uF 25V
R983	1-216-049-00	METAL	1K 5% 1/10W	C152	1-163-251-11	CERAMIC	100PF 5% 50V
R984	1-216-049-00	METAL	1K 5% 1/10W	C153	1-126-217-11	ELECT	15uF 20% 10V
<VARIABLE RESISTOR>				C154	1-163-038-91	CERAMIC	0.1uF 25V
RV301	1-238-852-11	RES, ADJ, CERMET 470		C155	1-163-038-91	CERAMIC	0.1uF 25V
RV302	1-238-852-11	RES, ADJ, CERMET 470		C156	1-163-038-91	CERAMIC	0.1uF 25V
RV303	1-238-852-11	RES, ADJ, CERMET 470		C157	1-126-217-11	ELECT	15uF 20% 10V
RV304	1-238-852-11	RES, ADJ, CERMET 470		C158	1-164-346-11	CERAMIC	1uF 16V
<CRYSTAL>				C159	1-163-038-91	CERAMIC	0.1uF 25V
X101	1-579-738-21	VIBRATOR, CRYSTAL		C160	1-128-065-11	ELECT	68uF 20% 10V
X301	1-579-466-11	VIBRATOR, CRYSTAL		C161	1-126-206-11	ELECT	100uF 20% 6.3V
*****				C162	1-163-038-91	CERAMIC	0.1uF 25V
*A-8274-835-A VA-76(B) BOARD, COMPLETE (UP-1200AEPM)				C163	1-128-065-11	ELECT	68uF 20% 10V
*****				C164	1-126-206-11	ELECT	100uF 20% 6.3V
<CAPACITOR>				C165	1-163-038-91	CERAMIC	0.1uF 25V
C101	1-163-038-91	CERAMIC	0.1uF 25V	C166	1-126-217-11	ELECT	15uF 20% 10V
C102	1-164-004-11	CERAMIC	0.1uF 10% 25V	C167	1-163-241-11	CERAMIC	39PF 5% 50V
C103	1-124-778-00	ELECT	22uF 20% 6.3V	C168	1-163-243-11	CERAMIC	47PF 5% 50V
C104	1-163-038-91	CERAMIC	0.1uF 25V	C169	1-163-038-91	CERAMIC	0.1uF 25V
C106	1-164-346-11	CERAMIC	1uF 16V	C173	1-163-038-91	CERAMIC	0.1uF 25V
C107	1-163-275-11	CERAMIC	0.001uF 5% 50V	C175	1-163-038-91	CERAMIC	0.1uF 25V
C108	1-126-217-11	ELECT	15uF 20% 10V	C176	1-126-217-11	ELECT	15uF 20% 10V
C109	1-163-038-91	CERAMIC	0.1uF 25V	C177	1-163-038-91	CERAMIC	0.1uF 25V
C110	1-163-110-00	CERAMIC	51PF 5% 50V	C180	1-163-141-00	CERAMIC	0.001uF 5% 50V
C111	1-163-097-00	CERAMIC	15PF 5% 50V	C181	1-163-099-00	CERAMIC	18PF 5% 50V
C112	1-163-253-11	CERAMIC	120PF 5% 50V	C182	1-163-038-91	CERAMIC	0.1uF 25V
C114	1-163-275-11	CERAMIC	0.001uF 5% 50V	C183	1-163-038-91	CERAMIC	0.1uF 25V
C115	1-124-778-00	ELECT	22uF 20% 6.3V	C185	1-163-038-91	CERAMIC	0.1uF 25V
C116	1-163-038-91	CERAMIC	0.1uF 25V	C187	1-163-038-91	CERAMIC	0.1uF 25V
C117	1-126-217-11	ELECT	15uF 20% 10V	C188	1-164-232-11	CERAMIC	0.01uF 10% 50V
C118	1-163-038-91	CERAMIC	0.1uF 25V	C190	1-163-017-00	CERAMIC	0.0047uF 10% 50V
C119	1-163-038-91	CERAMIC	0.1uF 25V	C191	1-163-137-00	CERAMIC	680PF 5% 50V
C120	1-163-141-00	CERAMIC	0.001uF 5% 50V	C192	1-164-232-11	CERAMIC	0.01uF 10% 50V
C121	1-163-141-00	CERAMIC	0.001uF 5% 50V	C193	1-126-217-11	ELECT	15uF 20% 10V
C122	1-163-141-00	CERAMIC	0.001uF 5% 50V	C194	1-164-232-11	CERAMIC	0.01uF 10% 50V
				C195	1-126-217-11	ELECT	15uF 20% 10V
				C196	1-164-232-11	CERAMIC	0.01uF 10% 50V
				C197	1-164-232-11	CERAMIC	0.01uF 10% 50V

VA-76(B)

Ref.No	Part No.	Description			Remark	Ref.No	Part No.	Description			Remark
C199	1-126-217-11	ELECT	15uF	20%	10V	C323	1-163-038-91	CERAMIC	0.1uF		25V
C200	1-126-217-11	ELECT	15uF	20%	10V	C324	1-163-038-91	CERAMIC	0.1uF		25V
C201	1-163-141-00	CERAMIC	0.001uF	5%	50V	C325	1-163-117-00	CERAMIC	100PF	5%	50V
C202	1-126-603-11	ELECT	4.7uF	20%	35V	C326	1-163-117-00	CERAMIC	100PF	5%	50V
C205	1-163-038-91	CERAMIC	0.1uF		25V	C327	1-126-193-11	ELECT	1uF	20%	50V
C206	1-164-005-11	CERAMIC	0.47uF		25V	C328	1-163-141-00	CERAMIC	0.001uF	5%	50V
C207	1-163-038-91	CERAMIC	0.1uF		25V	C329	1-164-004-11	CERAMIC	0.1uF	10%	25V
C209	1-126-217-11	ELECT	15uF	20%	10V	C330	1-164-005-11	CERAMIC	0.47uF		25V
C210	1-164-005-11	CERAMIC	0.47uF		25V	C331	1-164-004-11	CERAMIC	0.1uF	10%	25V
C211	1-164-005-11	CERAMIC	0.47uF		25V	C332	1-163-038-91	CERAMIC	0.1uF		25V
C212	1-163-038-91	CERAMIC	0.1uF		25V	C333	1-164-232-11	CERAMIC	0.01uF	10%	50V
C213	1-126-217-11	ELECT	15uF	20%	10V	C334	1-164-004-11	CERAMIC	0.1uF	10%	25V
C214	1-163-038-91	CERAMIC	0.1uF		25V	C335	1-126-217-11	ELECT	15uF	20%	10V
C215	1-164-005-11	CERAMIC	0.47uF		25V	C336	1-163-038-91	CERAMIC	0.1uF		25V
C216	1-126-193-11	ELECT	1uF	20%	50V	C337	1-163-227-11	CERAMIC	10PF		50V
C217	1-164-005-11	CERAMIC	0.47uF		25V	C338	1-164-004-11	CERAMIC	0.1uF	10%	25V
C218	1-163-235-11	CERAMIC	22PF	5%	50V	C339	1-126-217-11	ELECT	15uF	20%	10V
C220	1-164-005-11	CERAMIC	0.47uF		25V	C340	1-163-038-91	CERAMIC	0.1uF		25V
C221	1-164-005-11	CERAMIC	0.47uF		25V	C341	1-126-217-11	ELECT	15uF	20%	10V
C223	1-164-005-11	CERAMIC	0.47uF		25V	C342	1-163-038-91	CERAMIC	0.1uF		25V
C224	1-164-005-11	CERAMIC	0.47uF		25V	C343	1-126-217-11	ELECT	15uF	20%	10V
C225	1-126-217-11	ELECT	15uF	20%	10V	C344	1-163-038-91	CERAMIC	0.1uF		25V
C226	1-163-038-91	CERAMIC	0.1uF		25V	C345	1-126-217-11	ELECT	15uF	20%	10V
C227	1-164-005-11	CERAMIC	0.47uF		25V	C346	1-163-038-91	CERAMIC	0.1uF		25V
C228	1-163-251-11	CERAMIC	100PF	5%	50V	C347	1-163-227-11	CERAMIC	10PF		50V
C230	1-163-038-91	CERAMIC	0.1uF		25V	C348	1-164-004-11	CERAMIC	0.1uF	10%	25V
C233	1-163-133-00	CERAMIC	470PF	5%	50V	C349	1-128-065-11	ELECT	68uF	20%	10V
C250	1-163-127-00	CERAMIC	270PF	5%	50V	C350	1-163-038-91	CERAMIC	0.1uF		25V
C251	1-163-110-00	CERAMIC	51PF	5%	50V	C351	1-126-217-11	ELECT	15uF	20%	10V
C252	1-126-217-11	ELECT	15uF	20%	10V	C352	1-163-038-91	CERAMIC	0.1uF		25V
C260	1-164-004-11	CERAMIC	0.1uF	10%	25V	C353	1-163-809-11	CERAMIC	0.047uF	10%	25V
C261	1-163-097-00	CERAMIC	15PF	5%	50V	C354	1-163-037-11	CERAMIC	0.022uF	10%	25V
C262	1-163-141-00	CERAMIC	0.001uF	5%	50V	C355	1-163-038-91	CERAMIC	0.1uF		25V
C263	1-163-141-00	CERAMIC	0.001uF	5%	50V	C356	1-163-809-11	CERAMIC	0.047uF	10%	25V
C270	1-135-337-11	TANTAL	1uF	10%	6.3V	C357	1-107-682-11	CERAMIC	1uF	10%	16V
C271	1-126-217-11	ELECT	15uF	20%	10V	C358	1-164-004-11	CERAMIC	0.1uF	10%	25V
C281	1-126-207-11	ELECT	33uF	20%	4V	C359	1-126-193-11	ELECT	1uF	20%	50V
C282	1-126-217-11	ELECT	15uF	20%	10V	C360	1-163-106-00	CERAMIC	36PF	5%	50V
C285	1-164-005-11	CERAMIC	0.47uF		25V	C362	1-164-005-11	CERAMIC	0.47uF		25V
C286	1-164-005-11	CERAMIC	0.47uF		25V	C363	1-128-065-11	ELECT	68uF	20%	10V
C290	1-164-005-11	CERAMIC	0.47uF		25V	C364	1-163-038-91	CERAMIC	0.1uF		25V
C291	1-164-005-11	CERAMIC	0.47uF		25V	C366	1-163-235-11	CERAMIC	22PF	5%	50V
C295	1-164-004-11	CERAMIC	0.1uF	10%	25V	C367	1-126-217-11	ELECT	15uF	20%	10V
C301	1-126-217-11	ELECT	15uF	20%	10V	C368	1-163-038-91	CERAMIC	0.1uF		25V
C302	1-163-038-91	CERAMIC	0.1uF		25V	C369	1-126-217-11	ELECT	15uF	20%	10V
C303	1-163-077-00	CERAMIC	0.1uF	10%	25V	C370	1-163-038-91	CERAMIC	0.1uF		25V
C304	1-163-077-00	CERAMIC	0.1uF	10%	25V	C371	1-164-004-11	CERAMIC	0.1uF	10%	25V
C305	1-163-038-91	CERAMIC	0.1uF		25V	C372	1-126-193-11	ELECT	1uF	20%	50V
C306	1-164-004-11	CERAMIC	0.1uF	10%	25V	C373	1-163-227-11	CERAMIC	10PF		50V
C307	1-126-217-11	ELECT	15uF	20%	10V	C374	1-164-004-11	CERAMIC	0.1uF	10%	25V
C308	1-164-346-11	CERAMIC	1uF		16V	C375	1-163-038-91	CERAMIC	0.1uF		25V
C309	1-126-217-11	ELECT	15uF	20%	10V	C376	1-164-232-11	CERAMIC	0.01uF	10%	50V
C310	1-163-038-91	CERAMIC	0.1uF		25V	C377	1-135-145-11	TANTAL	0.47uF	20%	25V
C311	1-163-038-91	CERAMIC	0.1uF		25V	C378	1-126-217-11	ELECT	15uF	20%	10V
C312	1-126-217-11	ELECT	15uF	20%	10V	C379	1-163-038-91	CERAMIC	0.1uF		25V
C313	1-163-038-91	CERAMIC	0.1uF		25V	C380	1-126-217-11	ELECT	15uF	20%	10V
C314	1-126-217-11	ELECT	15uF	20%	10V	C381	1-163-245-11	CERAMIC	56PF	5%	50V
C315	1-126-217-11	ELECT	15uF	20%	10V	C382	1-135-210-11	TANTAL	4.7uF	10%	10V
C316	1-126-217-11	ELECT	15uF	20%	10V	C383	1-163-038-91	CERAMIC	0.1uF		25V
C317	1-126-217-11	ELECT	15uF	20%	10V	C384	1-163-038-91	CERAMIC	0.1uF		25V
C318	1-126-217-11	ELECT	15uF	20%	10V	C385	1-163-038-91	CERAMIC	0.1uF		25V
C319	1-163-038-91	CERAMIC	0.1uF		25V	C386	1-164-232-11	CERAMIC	0.01uF	10%	50V
C320	1-164-346-11	CERAMIC	1uF		16V	C387	1-163-038-91	CERAMIC	0.1uF		25V
C321	1-126-217-11	ELECT	15uF	20%	10V	C388	1-126-217-11	ELECT	15uF	20%	10V
C322	1-126-217-11	ELECT	15uF	20%	10V	C389	1-163-038-91	CERAMIC	0.1uF		25V

VA-76(B)

Ref.No	Part No.	Description	Remark	Ref.No	Part No.	Description	Remark
C390	1-163-038-91	CERAMIC	0.1uF	25V	C901	1-163-239-11	CERAMIC 33PF 5% 50V
C391	1-163-099-00	CERAMIC	18PF	5% 50V	C902	1-163-239-11	CERAMIC 33PF 5% 50V
C393	1-163-038-91	CERAMIC	0.1uF	25V	C903	1-163-239-11	CERAMIC 33PF 5% 50V
C394	1-128-065-11	ELECT	68uF	20% 10V	C910	1-135-210-11	TANTAL 4.7uF 10% 10V
C395	1-163-038-91	CERAMIC	0.1uF	25V	C911	1-135-210-11	TANTAL 4.7uF 10% 10V
C396	1-126-217-11	ELECT	15uF	20% 10V	C950	1-163-127-00	CERAMIC 270PF 5% 50V
C397	1-164-232-11	CERAMIC	0.01uF	10% 50V	C951	1-163-239-11	CERAMIC 33PF 5% 50V
C398	1-163-038-91	CERAMIC	0.1uF	25V	C990	1-126-217-11	ELECT 15uF 20% 10V
C399	1-164-004-11	CERAMIC	0.1uF	10% 25V	<CONNECTOR>		
C400	1-164-005-11	CERAMIC	0.47uF	25V	CN101	1-565-212-11	CONNECTOR, FPC (ZIF) 26P
C401	1-164-004-11	CERAMIC	0.1uF	10% 25V	CN102	1-565-212-11	CONNECTOR, FPC (ZIF) 26P
C402	1-164-004-11	CERAMIC	0.1uF	10% 25V	CN105	*1-560-892-00	PIN, CONNECTOR 4P
C404	1-163-038-91	CERAMIC	0.1uF	25V	CN110	1-506-472-11	PIN, CONNECTOR 7P
C410	1-163-243-11	CERAMIC	47PF	5% 50V	CN502	1-506-471-11	PIN, CONNECTOR 6P
C482	1-163-251-11	CERAMIC	100PF	5% 50V	<TRIMMER>		
C490	1-163-227-11	CERAMIC	10PF	5% 50V	CT101	1-141-423-61	CAP, ADJ
C499	1-163-235-11	CERAMIC	22PF	5% 50V	CT102	1-141-423-61	CAP, ADJ
C501	1-126-217-11	ELECT	15uF	20% 10V	CT103	1-141-373-11	CAP, CHIP TRIMMER
C502	1-163-038-91	CERAMIC	0.1uF	25V	<DIODE>		
C503	1-163-038-91	CERAMIC	0.1uF	25V	D101	8-719-002-81	DIODE 1T363A
C504	1-126-217-11	ELECT	15uF	20% 10V	D109	8-719-820-41	DIODE 1SS302
C505	1-163-239-11	CERAMIC	33PF	5% 50V	D110	8-719-820-41	DIODE 1SS302
C506	1-163-239-11	CERAMIC	33PF	5% 50V	D120	8-719-002-81	DIODE 1T363A
C507	1-163-038-91	CERAMIC	0.1uF	25V	D125	8-719-024-82	DIODE 1SS300
C508	1-163-038-91	CERAMIC	0.1uF	25V	D126	8-719-421-27	DIODE MA728
C509	1-126-217-11	ELECT	15uF	20% 10V	D301	8-719-820-41	DIODE 1SS302
C512	1-163-038-91	CERAMIC	0.1uF	25V	D302	8-719-820-41	DIODE 1SS302
C513	1-164-005-11	CERAMIC	0.47uF	25V	D310	8-719-820-41	DIODE 1SS302
C514	1-163-038-91	CERAMIC	0.1uF	25V	D311	8-719-820-41	DIODE 1SS302
C515	1-163-038-91	CERAMIC	0.1uF	25V	D312	8-719-820-41	DIODE 1SS302
C516	1-126-217-11	ELECT	15uF	20% 10V	D313	8-719-820-41	DIODE 1SS302
C517	1-163-038-91	CERAMIC	0.1uF	25V	D503	8-719-820-41	DIODE 1SS302
C518	1-164-232-11	CERAMIC	0.01uF	10% 50V	D508	8-719-820-41	DIODE 1SS302
C519	1-164-232-11	CERAMIC	0.01uF	10% 50V	D509	8-719-820-41	DIODE 1SS302
C520	1-163-809-11	CERAMIC	0.047uF	10% 25V	D910	8-719-025-18	DIODE 02C22.0-TE85L
C521	1-163-809-11	CERAMIC	0.047uF	10% 25V	D911	8-719-025-18	DIODE 02C22.0-TE85L
C522	1-163-809-11	CERAMIC	0.047uF	10% 25V	D912	8-719-025-18	DIODE 02C22.0-TE85L
C523	1-164-232-11	CERAMIC	0.01uF	10% 50V	<DELAY LINE>		
C524	1-164-005-11	CERAMIC	0.47uF	25V	DL301	1-406-516-11	DELAY LINE, LC (140NS) (EQ)
C525	1-126-217-11	ELECT	15uF	20% 10V	DL302	1-239-565-11	FILTER, LOW PASS
C526	1-126-217-11	ELECT	15uF	20% 10V	DL303	1-403-694-11	COIL
C527	1-163-038-91	CERAMIC	0.1uF	25V	<FERRITE, BEAD>		
C528	1-163-038-91	CERAMIC	0.1uF	25V	FB108	1-412-390-21	INDUCTOR CHIP OUH
C529	1-163-038-91	CERAMIC	0.1uF	25V	FB109	1-412-390-21	INDUCTOR CHIP OUH
C530	1-126-217-11	ELECT	15uF	20% 10V	FB112	1-412-390-21	INDUCTOR CHIP OUH
C531	1-163-038-91	CERAMIC	0.1uF	25V	FB121	1-412-390-21	INDUCTOR CHIP OUH
C532	1-126-217-11	ELECT	15uF	20% 10V	FB122	1-412-390-21	INDUCTOR CHIP OUH
C533	1-163-038-91	CERAMIC	0.1uF	25V	FB123	1-412-390-21	INDUCTOR CHIP OUH
C534	1-126-217-11	ELECT	15uF	20% 10V	FB304	1-412-390-21	INDUCTOR CHIP OUH
C535	1-163-038-91	CERAMIC	0.1uF	25V	FB305	1-412-390-21	INDUCTOR CHIP OUH
C536	1-164-005-11	CERAMIC	0.47uF	25V	FB306	1-412-390-21	INDUCTOR CHIP OUH
C537	1-164-005-11	CERAMIC	0.47uF	25V	FB307	1-412-390-21	INDUCTOR CHIP OUH
C538	1-126-217-11	ELECT	15uF	20% 10V	FB308	1-412-390-21	INDUCTOR CHIP OUH
C539	1-164-232-11	CERAMIC	0.01uF	10% 50V	FB309	1-412-390-21	INDUCTOR CHIP OUH
C540	1-164-232-11	CERAMIC	0.01uF	10% 50V	FB310	1-412-390-21	INDUCTOR CHIP OUH
C541	1-164-232-11	CERAMIC	0.01uF	10% 50V	FB311	1-412-390-21	INDUCTOR CHIP OUH
C543	1-163-235-11	CERAMIC	22PF	5% 50V	FB312	1-412-390-21	INDUCTOR CHIP OUH
C544	1-164-004-11	CERAMIC	0.1uF	10% 25V	FB313	1-412-390-21	INDUCTOR CHIP OUH
C545	1-126-217-11	ELECT	15uF	20% 10V	FB314	1-412-390-21	INDUCTOR CHIP OUH
C546	1-163-038-91	CERAMIC	0.1uF	25V	FB315	1-412-390-21	INDUCTOR CHIP OUH
C547	1-163-038-91	CERAMIC	0.1uF	25V			
C570	1-163-038-91	CERAMIC	0.1uF	25V			
C571	1-126-217-11	ELECT	15uF	20% 10V			
C572	1-126-217-11	ELECT	15uF	20% 10V			
C801	1-164-004-11	CERAMIC	0.1uF	10% 25V			

VA-76(B)

Ref.No	Part No.	Description	Remark	Ref.No	Part No.	Description	Remark
FB316	1-412-390-21	INDUCTOR CHIP OUH		IC109	8-759-242-70	IC TC7WU04F	
FB317	1-412-390-21	INDUCTOR CHIP OUH		IC110	8-759-907-81	IC SN74LS221NS	
				IC111	8-759-981-48	IC TL082CPS	
FB318	1-412-390-21	INDUCTOR CHIP OUH		IC112	8-759-011-65	IC MC74HC4053F	
FB319	1-412-390-21	INDUCTOR CHIP OUH		IC113	8-759-157-22	IC PQ06TZ1U	
FB320	1-412-390-21	INDUCTOR CHIP OUH		IC114	8-759-157-17	IC PQ05SZ1U	
FB321	1-412-390-21	INDUCTOR CHIP OUH		IC119	8-759-097-87	IC MB621948	
FB322	1-412-390-21	INDUCTOR CHIP OUH		IC121	8-752-372-78	IC CXD2024AQ	
FB323	1-412-390-21	INDUCTOR CHIP OUH		IC122	8-759-710-86	IC NJM2233BM	
FB324	1-412-390-21	INDUCTOR CHIP OUH		IC123	8-759-710-07	IC NJM2234M	
FB325	1-412-390-21	INDUCTOR CHIP OUH		IC125	8-759-710-86	IC NJM2233BM	
FB327	1-412-390-21	INDUCTOR CHIP OUH		IC126	8-759-242-64	IC TC4W53F	
FB328	1-412-390-21	INDUCTOR CHIP OUH		IC128	8-759-242-72	IC TC7W00F	
FB329	1-412-390-21	INDUCTOR CHIP OUH		IC130	8-752-341-58	IC CXD1217Q	
FB330	1-412-390-21	INDUCTOR CHIP OUH		IC150	8-759-242-76	IC TC7W08F	
FB331	1-412-390-21	INDUCTOR CHIP OUH		IC301	8-752-054-80	IC CXA1521M	
FB332	1-412-390-21	INDUCTOR CHIP OUH		IC302	8-759-011-65	IC MC74HC4053F	
FB334	1-412-390-21	INDUCTOR CHIP OUH		IC303	8-759-060-00	IC BA10324AF	
FB335	1-412-390-21	INDUCTOR CHIP OUH		IC304	8-759-060-00	IC BA10324AF	
FB336	1-412-390-21	INDUCTOR CHIP OUH		IC306	8-759-105-49	IC UPC319G2	
FB337	1-412-390-21	INDUCTOR CHIP OUH		IC307	8-759-635-27	IC M62352GP	
FB338	1-412-390-21	INDUCTOR CHIP OUH		IC308	8-759-635-27	IC M62352GP	
FB339	1-412-390-21	INDUCTOR CHIP OUH		IC309	8-759-278-57	IC AK6420HF-E2	
FB340	1-412-390-21	INDUCTOR CHIP OUH		IC310	8-752-340-25	IC CXL5505M	
FB343	1-412-390-21	INDUCTOR CHIP OUH		IC311	8-752-058-96	IC CXA1585Q	
FB344	1-412-390-21	INDUCTOR CHIP OUH		IC312	8-759-929-26	IC TL431CPS	
FB345	1-412-390-21	INDUCTOR CHIP OUH		IC313	8-759-745-64	IC NJM4560M	
FB346	1-412-390-21	INDUCTOR CHIP OUH		IC314	8-759-060-00	IC BA10324AF	
FB347	1-412-390-21	INDUCTOR CHIP OUH		IC320	8-759-745-64	IC NJM4560M	
FB348	1-412-390-21	INDUCTOR CHIP OUH		IC501	8-759-011-65	IC MC74HC4053F	
FB349	1-412-390-21	INDUCTOR CHIP OUH		IC504	8-759-254-98	IC M50555-218FP-TE2	
FB510	1-412-390-21	INDUCTOR CHIP OUH		IC506	8-752-033-07	IC CXA1145M	
FB511	1-412-390-21	INDUCTOR CHIP OUH		IC507	8-752-053-21	IC CXA1211M	
FB512	1-412-390-21	INDUCTOR CHIP OUH		IC508	8-759-710-86	IC NJM2233BM	
FB920	1-412-390-21	INDUCTOR CHIP OUH		IC511	8-752-053-21	IC CXA1211M	
FB921	1-412-390-21	INDUCTOR CHIP OUH				<JACK>	
FB922	1-412-390-21	INDUCTOR CHIP OUH		J101	1-565-276-21	JACK, ULTRA SMALL 1P	
		<FILTER>				<INDUCTOR>	
FL102	1-236-388-11	FILTER, EMI		L101	1-410-389-31	INDUCTOR CHIP 47UH	
FL103	1-236-388-11	FILTER, EMI		L102	1-410-388-31	INDUCTOR CHIP 39UH	
FL104	1-236-388-11	FILTER, EMI		L103	1-412-137-11	INDUCTOR 10UH	
FL105	1-236-388-11	FILTER, EMI		L110	1-410-200-31	INDUCTOR CHIP 4.7UH	
FL106	1-236-388-11	FILTER, EMI		L120	1-410-385-11	INDUCTOR CHIP 22UH	
FL107	1-236-388-11	FILTER, EMI		L130	1-410-385-11	INDUCTOR CHIP 22UH	
FL201	1-239-839-11	FILTER, LOW PASS		L140	1-410-385-11	INDUCTOR CHIP 22UH	
FL202	1-236-265-11	FILTER, BAND PASS		L141	1-410-385-11	INDUCTOR CHIP 22UH	
FL203	1-239-564-11	FILTER, LOW PASS		L301	1-410-377-31	INDUCTOR CHIP 4.7UH	
FL301	1-239-564-11	FILTER, LOW PASS		L302	1-410-389-31	INDUCTOR CHIP 47UH	
FL304	1-406-515-11	DELAY LINE, LC		L303	1-410-388-31	INDUCTOR CHIP 39UH	
FL501	1-239-563-11	FILTER, LOW PASS		L350	1-410-377-31	INDUCTOR CHIP 4.7UH	
FL502	1-239-563-11	FILTER, LOW PASS		L501	1-410-384-31	INDUCTOR CHIP 18UH	
FL503	1-239-563-11	FILTER, LOW PASS		L901	1-410-730-11	INDUCTOR CHIP 0.12UH	
FL504	1-239-564-11	FILTER, LOW PASS		L902	1-410-730-11	INDUCTOR CHIP 0.12UH	
FL505	1-236-265-11	FILTER, BAND PASS		L903	1-410-730-11	INDUCTOR CHIP 0.12UH	
		<IC>		L904	1-412-188-11	INDUCTOR 22UH	
IC101	8-759-079-66	IC TC74VHC123AFS		L905	1-412-188-11	INDUCTOR 22UH	
IC102	8-759-105-49	IC UPC319G2				<FILTER>	
IC103	8-759-085-67	IC LM339NS		LF101	1-424-090-11	COIL, LINE FILTER	
IC104	8-759-996-43	IC RC4558PS		LF102	1-424-090-11	COIL, LINE FILTER	
IC106	8-759-710-12	IC NJM2230M		LF106	1-424-090-11	COIL, LINE FILTER	
IC107	8-752-326-08	IC CXD1159Q					
IC108	8-759-907-81	IC SN74LS221NS					

VA-76(B)

Ref.No	Part No.	Description	Remark	Ref.No	Part No.	Description	Remark
		<TRANSISTOR>					
Q101	8-729-230-60	TRANSISTOR 2SA1586-YG		Q509	8-729-232-66	TRANSISTOR 2SA1618-YGRTE85L	
Q102	8-729-230-60	TRANSISTOR 2SA1586-YG		Q510	8-729-232-66	TRANSISTOR 2SA1618-YGRTE85L	
Q103	8-729-230-63	TRANSISTOR 2SC4116-YG		Q511	8-729-230-63	TRANSISTOR 2SC4116-YG	
Q104	8-729-230-63	TRANSISTOR 2SC4116-YG		Q512	8-729-230-60	TRANSISTOR 2SA1586-YG	
Q105	8-729-230-63	TRANSISTOR 2SC4116-YG		Q513	8-729-230-63	TRANSISTOR 2SC4116-YG	
Q106	8-729-120-28	TRANSISTOR 2SC1623-L5L6		Q514	8-729-230-63	TRANSISTOR 2SC4116-YG	
Q108	8-729-230-63	TRANSISTOR 2SC4116-YG		Q515	8-729-230-63	TRANSISTOR 2SC4116-YG	
Q109	8-729-230-63	TRANSISTOR 2SC4116-YG		Q516	8-729-230-63	TRANSISTOR 2SC4116-YG	
Q110	8-729-230-63	TRANSISTOR 2SC4116-YG		Q517	8-729-230-63	TRANSISTOR 2SC4116-YG	
Q111	8-729-230-63	TRANSISTOR 2SC4116-YG		Q518	8-729-230-63	TRANSISTOR 2SC4116-YG	
Q112	8-729-230-60	TRANSISTOR 2SA1586-YG		Q519	8-729-230-63	TRANSISTOR 2SC4116-YG	
Q113	8-729-402-87	TRANSISTOR XN2401		Q520	8-729-230-63	TRANSISTOR 2SC4116-YG	
Q116	8-729-230-63	TRANSISTOR 2SC4116-YG		Q521	8-729-230-63	TRANSISTOR 2SC4116-YG	
Q117	8-729-230-63	TRANSISTOR 2SC4116-YG		Q522	8-729-230-63	TRANSISTOR 2SC4116-YG	
Q118	8-729-402-84	TRANSISTOR XN4601-TW		Q523	8-729-230-63	TRANSISTOR 2SC4116-YG	
Q119	8-729-230-63	TRANSISTOR 2SC4116-YG		Q525	8-729-230-63	TRANSISTOR 2SC4116-YG	
Q120	8-729-230-63	TRANSISTOR 2SC4116-YG		Q526	8-729-230-63	TRANSISTOR 2SC4116-YG	
Q121	8-729-230-63	TRANSISTOR 2SC4116-YG		Q527	8-729-230-63	TRANSISTOR 2SC4116-YG	
Q122	8-729-230-63	TRANSISTOR 2SC4116-YG		Q528	8-729-014-86	TRANSISTOR 2SC4207-YGRTE85L	
Q123	8-729-014-86	TRANSISTOR 2SC4207-YGRTE85L		Q529	8-729-014-86	TRANSISTOR 2SC4207-YGRTE85L	
Q124	8-729-402-84	TRANSISTOR XN4601		Q530	8-729-230-60	TRANSISTOR 2SA1586-YG	
Q125	8-729-230-63	TRANSISTOR 2SC4116-YG		Q531	8-729-230-60	TRANSISTOR 2SA1586-YG	
Q126	8-729-402-84	TRANSISTOR XN4601		Q532	8-729-230-60	TRANSISTOR 2SA1586-YG	
Q170	8-729-230-60	TRANSISTOR 2SA1586-YG		Q540	8-729-014-86	TRANSISTOR 2SC4207-YGRTE85L	
Q171	8-729-013-88	TRANSISTOR RN1302-TE85L		Q901	8-729-230-60	TRANSISTOR 2SA1586-YG	
Q301	8-729-014-86	TRANSISTOR 2SC4207-YGRTE85L		Q902	8-729-230-63	TRANSISTOR 2SC4116-YG	
Q302	8-729-230-63	TRANSISTOR 2SC4116-YG		Q910	8-729-230-60	TRANSISTOR 2SA1586-YG	
Q303	8-729-402-84	TRANSISTOR XN4601				<REGISTOR>	
Q304	8-729-402-84	TRANSISTOR XN4601		R101	1-216-051-00	METAL 1.2K 5%	1/10W
Q305	8-729-230-63	TRANSISTOR 2SC4116-YG		R102	1-216-053-00	METAL 1.5K 5%	1/10W
Q306	8-729-230-60	TRANSISTOR 2SA1586-YG		R103	1-216-053-00	METAL 1.5K 5%	1/10W
Q307	8-729-232-66	TRANSISTOR 2SA1618-YGRTE85L		R104	1-216-113-00	METAL 470K 5%	1/10W
Q308	8-729-230-63	TRANSISTOR 2SC4116-YG		R105	1-216-057-00	METAL 2.2K 5%	1/10W
Q309	8-729-402-81	TRANSISTOR XN4501		R106	1-216-057-00	METAL 2.2K 5%	1/10W
Q310	8-729-230-60	TRANSISTOR 2SA1586-YG		R107	1-216-065-00	METAL 4.7K 5%	1/10W
Q311	8-729-402-81	TRANSISTOR XN4501		R108	1-216-057-00	METAL 2.2K 5%	1/10W
Q312	8-729-230-63	TRANSISTOR 2SC4116-YG		R109	1-216-057-00	METAL 2.2K 5%	1/10W
Q316	8-729-230-63	TRANSISTOR 2SC4116-YG		R110	1-216-053-00	METAL 1.5K 5%	1/10W
Q320	8-729-230-63	TRANSISTOR 2SC4116-YG		R111	1-216-075-00	METAL 12K 5%	1/10W
Q321	8-729-014-86	TRANSISTOR 2SC4207-YGRTE85L		R112	1-216-001-00	METAL 10 5%	1/10W
Q322	8-729-230-63	TRANSISTOR 2SC4116-YG		R113	1-216-057-00	METAL 2.2K 5%	1/10W
Q323	8-729-230-63	TRANSISTOR 2SC4116-YG		R114	1-216-065-00	METAL 4.7K 5%	1/10W
Q324	8-729-014-86	TRANSISTOR 2SC4207-YGRTE85L		R115	1-216-057-00	METAL 2.2K 5%	1/10W
Q326	8-729-230-63	TRANSISTOR 2SC4116-YG		R116	1-216-081-00	METAL 22K 5%	1/10W
Q328	8-729-230-63	TRANSISTOR 2SC4116-YG		R117	1-216-049-00	METAL 1K 5%	1/10W
Q329	8-729-230-63	TRANSISTOR 2SC4116-YG		R118	1-216-075-00	METAL 12K 5%	1/10W
Q330	8-729-014-86	TRANSISTOR 2SC4207-YGRTE85L		R119	1-216-073-00	METAL 10K 5%	1/10W
Q331	8-729-230-63	TRANSISTOR 2SC4116-YG		R120	1-216-075-00	METAL 12K 5%	1/10W
Q334	8-729-230-63	TRANSISTOR 2SC4116-YG		R121	1-216-035-00	METAL 270 5%	1/10W
Q335	8-729-014-86	TRANSISTOR 2SC4207-YGRTE85L		R122	1-216-295-11	METAL 0 5%	1/10W
Q336	8-729-230-60	TRANSISTOR 2SA1586-YG		R123	1-216-049-00	METAL 1K 5%	1/10W
Q350	8-729-230-63	TRANSISTOR 2SC4116-YG		R124	1-216-065-00	METAL 4.7K 5%	1/10W
Q360	8-729-402-84	TRANSISTOR XN4601		R125	1-216-033-00	METAL 220 5%	1/10W
Q361	8-729-230-63	TRANSISTOR 2SC4116-YG		R127	1-216-037-00	METAL 330 5%	1/10W
Q400	8-729-230-63	TRANSISTOR 2SC4116-YG		R128	1-216-085-00	METAL 33K 5%	1/10W
Q501	8-729-230-63	TRANSISTOR 2SC4116-YG		R129	1-216-069-00	METAL 6.8K 5%	1/10W
Q502	8-729-230-63	TRANSISTOR 2SC4116-YG		R130	1-216-083-00	METAL 27K 5%	1/10W
Q503	8-729-230-60	TRANSISTOR 2SA1586-YG		R131	1-216-073-00	METAL 10K 5%	1/10W
Q504	8-729-230-60	TRANSISTOR 2SA1586-YG		R132	1-216-073-00	METAL 10K 5%	1/10W
Q505	8-729-230-63	TRANSISTOR 2SC4116-YG		R133	1-216-097-00	METAL 100K 5%	1/10W
Q506	8-729-230-63	TRANSISTOR 2SC4116-YG		R134	1-216-049-00	METAL 1K 5%	1/10W
Q507	8-729-232-66	TRANSISTOR 2SA1618-YGRTE85L		R135	1-216-033-00	METAL 220 5%	1/10W
Q508	8-729-230-63	TRANSISTOR 2SC4116-YG		R136	1-216-093-00	METAL 68K 5%	1/10W

VA-76(B)

Ref.No	Part No.	Description	Remark			Ref.No	Part No.	Description	Remark		
R137	1-216-053-00	METAL	1.5K	5%	1/10W	R214	1-216-057-00	METAL	2.2K	5%	1/10W
R138	1-216-051-00	METAL	1.2K	5%	1/10W	R216	1-216-041-00	METAL	470	5%	1/10W
R139	1-216-053-00	METAL	1.5K	5%	1/10W	R217	1-216-032-00	METAL	200	5%	1/10W
R140	1-216-295-11	METAL	0	5%	1/10W	R218	1-216-053-00	METAL	1.5K	5%	1/10W
R141	1-216-069-00	METAL	6.8K	5%	1/10W	R219	1-216-053-00	METAL	1.5K	5%	1/10W
R142	1-216-081-00	METAL	22K	5%	1/10W	R220	1-216-049-00	METAL	1K	5%	1/10W
R143	1-216-081-00	METAL	22K	5%	1/10W	R221	1-216-049-00	METAL	1K	5%	1/10W
R144	1-216-105-00	METAL	220K	5%	1/10W	R222	1-216-073-00	METAL	10K	5%	1/10W
R145	1-216-067-00	METAL	5.6K	5%	1/10W	R223	1-216-041-00	METAL	470	5%	1/10W
R146	1-216-055-00	METAL	1.8K	5%	1/10W	R224	1-216-049-00	METAL	1K	5%	1/10W
R147	1-216-057-00	METAL	2.2K	5%	1/10W	R225	1-216-053-00	METAL	1.5K	5%	1/10W
R148	1-216-057-00	METAL	2.2K	5%	1/10W	R227	1-216-053-00	METAL	1.5K	5%	1/10W
R149	1-216-063-00	METAL	3.9K	5%	1/10W	R228	1-216-049-00	METAL	1K	5%	1/10W
R150	1-216-057-00	METAL	2.2K	5%	1/10W	R229	1-216-053-00	METAL	1.5K	5%	1/10W
R151	1-216-043-00	METAL	560	5%	1/10W	R230	1-216-049-00	METAL	1K	5%	1/10W
R152	1-216-031-00	METAL	180	5%	1/10W	R231	1-216-051-00	METAL	1.2K	5%	1/10W
R153	1-216-043-00	METAL	560	5%	1/10W	R232	1-216-041-00	METAL	470	5%	1/10W
R154	1-216-057-00	METAL	2.2K	5%	1/10W	R233	1-216-061-00	METAL	3.3K	5%	1/10W
R155	1-216-093-00	METAL	68K	5%	1/10W	R234	1-216-295-11	METAL	0	5%	1/10W
R156	1-216-021-00	METAL	68	5%	1/10W	R235	1-216-053-00	METAL	1.5K	5%	1/10W
R157	1-216-057-00	METAL	2.2K	5%	1/10W	R236	1-216-053-00	METAL	1.5K	5%	1/10W
R158	1-216-061-00	METAL	3.3K	5%	1/10W	R237	1-216-049-00	METAL	1K	5%	1/10W
R159	1-216-057-00	METAL	2.2K	5%	1/10W	R238	1-216-049-00	METAL	1K	5%	1/10W
R160	1-216-065-00	METAL	4.7K	5%	1/10W	R239	1-216-033-00	METAL	220	5%	1/10W
R161	1-216-069-00	METAL	6.8K	5%	1/10W	R240	1-216-061-00	METAL	3.3K	5%	1/10W
R162	1-216-665-11	METAL	3.9K	0.50%	1/10W	R241	1-216-053-00	METAL	1.5K	5%	1/10W
R163	1-216-053-00	METAL	1.5K	5%	1/10W	R245	1-216-105-00	METAL	220K	5%	1/10W
R164	1-216-073-00	METAL	10K	5%	1/10W	R255	1-216-041-00	METAL	470	5%	1/10W
R165	1-216-065-00	METAL	4.7K	5%	1/10W	R260	1-216-057-00	METAL	2.2K	5%	1/10W
R166	1-216-047-00	METAL	820	5%	1/10W	R261	1-216-093-00	METAL	68K	5%	1/10W
R167	1-216-027-00	METAL	120	5%	1/10W	R262	1-216-037-00	METAL	330	5%	1/10W
R168	1-216-073-00	METAL	10K	5%	1/10W	R263	1-216-073-00	METAL	10K	5%	1/10W
R169	1-216-069-00	METAL	6.8K	5%	1/10W	R265	1-216-073-00	METAL	10K	5%	1/10W
R171	1-216-065-00	METAL	4.7K	5%	1/10W	R266	1-216-073-00	METAL	10K	5%	1/10W
R172	1-216-057-00	METAL	2.2K	5%	1/10W	R268	1-216-037-00	METAL	330	5%	1/10W
R173	1-216-053-00	METAL	1.5K	5%	1/10W	R269	1-216-295-11	METAL	0	5%	1/10W
R175	1-216-049-00	METAL	1K	5%	1/10W	R272	1-216-065-00	METAL	4.7K	5%	1/10W
R176	1-216-041-00	METAL	470	5%	1/10W	R273	1-216-105-00	METAL	220K	5%	1/10W
R177	1-216-049-00	METAL	1K	5%	1/10W	R274	1-216-073-00	METAL	10K	5%	1/10W
R178	1-216-049-00	METAL	1K	5%	1/10W	R280	1-216-061-00	METAL	3.3K	5%	1/10W
R179	1-216-295-11	METAL	0	5%	1/10W	R281	1-216-022-00	METAL	75	5%	1/10W
R180	1-216-049-00	METAL	1K	5%	1/10W	R282	1-216-032-00	METAL	200	5%	1/10W
R181	1-216-070-00	METAL	7.5K	5%	1/10W	R283	1-216-053-00	METAL	1.5K	5%	1/10W
R182	1-216-049-00	METAL	1K	5%	1/10W	R284	1-216-689-11	METAL	39K	5%	1/10W
R183	1-216-295-11	METAL	0	5%	1/10W	R285	1-216-053-00	METAL	1.5K	5%	1/10W
R185	1-216-061-00	METAL	3.3K	5%	1/10W	R288	1-216-043-00	METAL	560	5%	1/10W
R186	1-216-053-00	METAL	1.5K	5%	1/10W	R289	1-216-057-00	METAL	2.2K	5%	1/10W
R187	1-216-033-00	METAL	220	5%	1/10W	R290	1-216-045-00	METAL	680	5%	1/10W
R188	1-216-057-00	METAL	2.2K	5%	1/10W	R291	1-216-045-00	METAL	680	5%	1/10W
R190	1-216-057-00	METAL	2.2K	5%	1/10W	R292	1-216-031-00	METAL	180	5%	1/10W
R191	1-216-057-00	METAL	2.2K	5%	1/10W	R293	1-216-057-00	METAL	2.2K	5%	1/10W
R192	1-216-049-00	METAL	1K	5%	1/10W	R301	1-216-053-00	METAL	1.5K	5%	1/10W
R193	1-216-295-11	METAL	0	5%	1/10W	R302	1-216-053-00	METAL	1.5K	5%	1/10W
R195	1-216-049-00	METAL	1K	5%	1/10W	R303	1-216-053-00	METAL	1.5K	5%	1/10W
R196	1-216-049-00	METAL	1K	5%	1/10W	R304	1-216-033-00	METAL	220	5%	1/10W
R197	1-216-049-00	METAL	1K	5%	1/10W	R305	1-216-033-00	METAL	220	5%	1/10W
R198	1-216-049-00	METAL	1K	5%	1/10W	R306	1-216-057-00	METAL	2.2K	5%	1/10W
R200	1-216-067-00	METAL	5.6K	5%	1/10W	R307	1-216-057-00	METAL	2.2K	5%	1/10W
R202	1-216-295-11	METAL	0	5%	1/10W	R308	1-216-061-00	METAL	3.3K	5%	1/10W
R206	1-216-295-11	METAL	0	5%	1/10W	R309	1-216-065-00	METAL	4.7K	5%	1/10W
R209	1-216-039-00	METAL	390	5%	1/10W	R310	1-216-065-00	METAL	4.7K	5%	1/10W
R210	1-216-041-00	METAL	470	5%	1/10W	R311	1-216-061-00	METAL	3.3K	5%	1/10W
R211	1-216-057-00	METAL	2.2K	5%	1/10W	R313	1-216-033-00	METAL	220	5%	1/10W
R212	1-216-073-00	METAL	10K	5%	1/10W	R314	1-216-033-00	METAL	220	5%	1/10W
R213	1-216-083-00	METAL	27K	5%	1/10W	R315	1-216-089-00	METAL	47K	5%	1/10W

VA-76(B)

Ref.No	Part No.	Description	Remark	Ref.No	Part No.	Description	Remark
R316	1-216-033-00	METAL	220 5% 1/10W	R389	1-216-045-00	METAL	680 5% 1/10W
R317	1-216-033-00	METAL	220 5% 1/10W	R391	1-216-049-00	METAL	1K 5% 1/10W
R318	1-216-033-00	METAL	220 5% 1/10W	R392	1-216-095-00	METAL	82K 5% 1/10W
R319	1-216-073-00	METAL	10K 5% 1/10W	R393	1-216-049-00	METAL	1K 5% 1/10W
R320	1-216-033-00	METAL	220 5% 1/10W	R394	1-216-057-00	METAL	2.2K 5% 1/10W
R321	1-216-033-00	METAL	220 5% 1/10W	R395	1-216-053-00	METAL	1.5K 5% 1/10W
R322	1-216-073-00	METAL	10K 5% 1/10W	R397	1-216-049-00	METAL	1K 5% 1/10W
R323	1-216-033-00	METAL	10K 5% 1/10W	R399	1-216-049-00	METAL	1K 5% 1/10W
R324	1-216-033-00	METAL	220 5% 1/10W	R400	1-216-033-00	METAL	220 5% 1/10W
R325	1-216-073-00	METAL	10K 5% 1/10W	R401	1-216-053-00	METAL	1.5K 5% 1/10W
R326	1-216-057-00	METAL	2.2K 5% 1/10W	R402	1-216-053-00	METAL	1.5K 5% 1/10W
R327	1-216-077-00	METAL	15K 5% 1/10W	R403	1-216-295-11	METAL	0 5% 1/10W
R328	1-216-033-00	METAL	220 5% 1/10W	R405	1-216-015-00	METAL	39 5% 1/10W
R329	1-216-033-00	METAL	220 5% 1/10W	R406	1-216-033-00	METAL	220 5% 1/10W
R330	1-216-057-00	METAL	2.2K 5% 1/10W	R407	1-216-049-00	METAL	1K 5% 1/10W
R331	1-216-033-00	METAL	220 5% 1/10W	R408	1-216-057-00	METAL	2.2K 5% 1/10W
R332	1-216-053-00	METAL	1.5K 5% 1/10W	R409	1-216-053-00	METAL	1.5K 5% 1/10W
R333	1-216-057-00	METAL	2.2K 5% 1/10W	R410	1-216-049-00	METAL	1K 5% 1/10W
R334	1-216-053-00	METAL	1.5K 5% 1/10W	R413	1-216-049-00	METAL	1K 5% 1/10W
R335	1-216-053-00	METAL	1.5K 5% 1/10W	R414	1-216-033-00	METAL	220 5% 1/10W
R336	1-216-033-00	METAL	220 5% 1/10W	R415	1-216-114-00	METAL	510K 5% 1/10W
R337	1-216-073-00	METAL	10K 5% 1/10W	R416	1-216-053-00	METAL	1.5K 5% 1/10W
R338	1-216-033-00	METAL	220 5% 1/10W	R417	1-216-053-00	METAL	1.5K 5% 1/10W
R339	1-216-073-00	METAL	10K 5% 1/10W	R418	1-216-049-00	METAL	1K 5% 1/10W
R340	1-216-057-00	METAL	2.2K 5% 1/10W	R419	1-216-051-00	METAL	1.2K 5% 1/10W
R341	1-216-057-00	METAL	2.2K 5% 1/10W	R420	1-208-789-11	METAL	2K 0.50% 1/10W
R342	1-216-045-00	METAL	680 5% 1/10W	R422	1-216-041-00	METAL	470 5% 1/10W
R343	1-216-061-00	METAL	3.3K 5% 1/10W	R424	1-216-033-00	METAL	220 5% 1/10W
R344	1-216-057-00	METAL	2.2K 5% 1/10W	R425	1-216-061-00	METAL	3.3K 5% 1/10W
R345	1-216-057-00	METAL	2.2K 5% 1/10W	R429	1-216-049-00	METAL	1K 5% 1/10W
R346	1-216-117-00	METAL	680K 5% 1/10W	R430	1-216-057-00	METAL	2.2K 5% 1/10W
R347	1-216-073-00	METAL	10K 5% 1/10W	R432	1-216-057-00	METAL	2.2K 5% 1/10W
R348	1-216-053-00	METAL	1.5K 5% 1/10W	R433	1-216-053-00	METAL	1.5K 5% 1/10W
R349	1-216-065-00	METAL	4.7K 5% 1/10W	R434	1-216-075-00	METAL	12K 5% 1/10W
R350	1-216-065-00	METAL	4.7K 5% 1/10W	R435	1-216-053-00	METAL	1.5K 5% 1/10W
R351	1-216-041-00	METAL	470 5% 1/10W	R436	1-216-295-11	METAL	0 5% 1/10W
R352	1-216-071-00	METAL	8.2K 5% 1/10W	R437	1-216-049-00	METAL	1K 5% 1/10W
R353	1-216-089-00	METAL	47K 5% 1/10W	R439	1-216-069-00	METAL	6.8K 5% 1/10W
R354	1-216-073-00	METAL	10K 5% 1/10W	R441	1-216-049-00	METAL	1K 5% 1/10W
R355	1-216-089-00	METAL	47K 5% 1/10W	R442	1-216-033-00	METAL	220 5% 1/10W
R356	1-216-073-00	METAL	10K 5% 1/10W	R443	1-216-103-00	METAL	180K 5% 1/10W
R357	1-216-057-00	METAL	2.2K 5% 1/10W	R444	1-216-033-00	METAL	220 5% 1/10W
R358	1-216-045-00	METAL	680 5% 1/10W	R445	1-216-025-00	METAL	100 5% 1/10W
R359	1-216-057-00	METAL	2.2K 5% 1/10W	R446	1-216-033-00	METAL	220 5% 1/10W
R361	1-216-295-11	METAL	0 5% 1/10W	R447	1-216-053-00	METAL	1.5K 5% 1/10W
R363	1-216-057-00	METAL	2.2K 5% 1/10W	R448	1-216-053-00	METAL	1.5K 5% 1/10W
R365	1-216-073-00	METAL	10K 5% 1/10W	R449	1-216-053-00	METAL	1.5K 5% 1/10W
R366	1-216-085-00	METAL	33K 5% 1/10W	R450	1-216-049-00	METAL	1K 5% 1/10W
R367	1-216-047-00	METAL	820 5% 1/10W	R451	1-216-049-00	METAL	1K 5% 1/10W
R368	1-216-049-00	METAL	1K 5% 1/10W	R452	1-216-049-00	METAL	1K 5% 1/10W
R369	1-216-049-00	METAL	1K 5% 1/10W	R453	1-216-033-00	METAL	220 5% 1/10W
R370	1-216-041-00	METAL	470 5% 1/10W	R454	1-216-295-11	METAL	0 5% 1/10W
R371	1-216-057-00	METAL	2.2K 5% 1/10W	R455	1-216-081-00	METAL	22K 5% 1/10W
R372	1-216-041-00	METAL	470 5% 1/10W	R456	1-216-081-00	METAL	22K 5% 1/10W
R376	1-216-053-00	METAL	1.5K 5% 1/10W	R457	1-216-081-00	METAL	22K 5% 1/10W
R378	1-216-295-11	METAL	0 5% 1/10W	R458	1-216-061-00	METAL	3.3K 5% 1/10W
R379	1-216-295-11	METAL	0 5% 1/10W	R459	1-216-061-00	METAL	3.3K 5% 1/10W
R380	1-216-033-00	METAL	220 5% 1/10W	R460	1-216-061-00	METAL	3.3K 5% 1/10W
R381	1-216-295-11	METAL	0 5% 1/10W	R461	1-216-065-00	METAL	4.7K 5% 1/10W
R382	1-216-065-00	METAL	4.7K 5% 1/10W	R462	1-216-051-00	METAL	1.2K 5% 1/10W
R383	1-216-073-00	METAL	10K 5% 1/10W	R463	1-216-059-00	METAL	2.7K 5% 1/10W
R384	1-216-061-00	METAL	3.3K 5% 1/10W	R464	1-216-097-00	METAL	100K 5% 1/10W
R385	1-216-065-00	METAL	4.7K 5% 1/10W	R465	1-216-049-00	METAL	1K 5% 1/10W
R386	1-216-033-00	METAL	220 5% 1/10W	R466	1-216-061-00	METAL	3.3K 5% 1/10W
R387	1-216-045-00	METAL	680 5% 1/10W	R467	1-216-049-00	METAL	1K 5% 1/10W

VA-76(B)

Ref.No	Part No.	Description	Remark	Ref.No	Part No.	Description	Remark
R468	1-216-065-00	METAL	4.7K 5% 1/10W	R544	1-216-049-00	METAL	1K 5% 1/10W
R469	1-216-081-00	METAL	22K 5% 1/10W	R545	1-216-057-00	METAL	2.2K 5% 1/10W
R470	1-216-071-00	METAL	8.2K 5% 1/10W	R546	1-216-049-00	METAL	1K 5% 1/10W
R471	1-216-073-00	METAL	10K 5% 1/10W	R547	1-216-057-00	METAL	2.2K 5% 1/10W
R472	1-216-053-00	METAL	1.5K 5% 1/10W	R548	1-216-049-00	METAL	1K 5% 1/10W
R473	1-216-295-11	METAL	0 5% 1/10W	R549	1-216-049-00	METAL	1K 5% 1/10W
R474	1-216-053-00	METAL	1.5K 5% 1/10W	R550	1-216-049-00	METAL	1K 5% 1/10W
R475	1-216-065-00	METAL	4.7K 5% 1/10W	R551	1-216-057-00	METAL	2.2K 5% 1/10W
R476	1-216-067-00	METAL	5.6K 5% 1/10W	R552	1-216-057-00	METAL	2.2K 5% 1/10W
R478	1-216-053-00	METAL	1.5K 5% 1/10W	R553	1-216-033-00	METAL	220 5% 1/10W
R479	1-216-041-00	METAL	470 5% 1/10W	R554	1-216-059-00	METAL	2.7K 5% 1/10W
R481	1-216-295-11	METAL	0 5% 1/10W	R555	1-216-059-00	METAL	2.7K 5% 1/10W
R482	1-208-775-11	METAL	510 0.50% 1/10W	R556	1-216-033-00	METAL	220 5% 1/10W
R483	1-216-033-00	METAL	220 5% 1/10W	R557	1-216-041-00	METAL	470 5% 1/10W
R487	1-216-051-00	METAL	1.2K 5% 1/10W	R558	1-216-041-00	METAL	470 5% 1/10W
R489	1-216-045-00	METAL	680 5% 1/10W	R559	1-216-022-00	METAL	75 5% 1/10W
R490	1-216-041-00	METAL	470 5% 1/10W	R560	1-216-041-00	METAL	470 5% 1/10W
R491	1-216-053-00	METAL	1.5K 5% 1/10W	R561	1-216-001-00	METAL	10 5% 1/10W
R493	1-216-061-00	METAL	3.3K 5% 1/10W	R563	1-216-001-00	METAL	10 5% 1/10W
R494	1-216-071-00	METAL	8.2K 5% 1/10W	R564	1-216-001-00	METAL	10 5% 1/10W
R495	1-216-073-00	METAL	10K 5% 1/10W	R565	1-216-001-00	METAL	10 5% 1/10W
R496	1-216-073-00	METAL	10K 5% 1/10W	R566	1-216-001-00	METAL	10 5% 1/10W
R497	1-216-073-00	METAL	10K 5% 1/10W	R567	1-216-001-00	METAL	10 5% 1/10W
R498	1-216-073-00	METAL	10K 5% 1/10W	R568	1-216-051-00	METAL	1.2K 5% 1/10W
R499	1-216-077-00	METAL	15K 5% 1/10W	R569	1-216-063-00	METAL	3.9K 5% 1/10W
R501	1-216-057-00	METAL	2.2K 5% 1/10W	R570	1-216-051-00	METAL	1.2K 5% 1/10W
R502	1-216-057-00	METAL	2.2K 5% 1/10W	R571	1-216-061-00	METAL	3.3K 5% 1/10W
R503	1-216-057-00	METAL	2.2K 5% 1/10W	R572	1-216-041-00	METAL	470 5% 1/10W
R504	1-216-295-11	METAL	0 5% 1/10W	R573	1-216-022-00	METAL	75 5% 1/10W
R505	1-216-033-00	METAL	220 5% 1/10W	R575	1-216-041-00	METAL	470 5% 1/10W
R506	1-216-033-00	METAL	220 5% 1/10W	R576	1-216-041-00	METAL	470 5% 1/10W
R507	1-216-033-00	METAL	220 5% 1/10W	R577	1-216-053-00	METAL	1.5K 5% 1/10W
R508	1-216-033-00	METAL	220 5% 1/10W	R578	1-216-081-00	METAL	22K 5% 1/10W
R509	1-216-057-00	METAL	2.2K 5% 1/10W	R579	1-216-081-00	METAL	22K 5% 1/10W
R510	1-216-057-00	METAL	2.2K 5% 1/10W	R581	1-216-055-00	METAL	1.8K 5% 1/10W
R511	1-216-057-00	METAL	2.2K 5% 1/10W	R582	1-216-053-00	METAL	1.5K 5% 1/10W
R512	1-216-033-00	METAL	220 5% 1/10W	R583	1-216-053-00	METAL	1.5K 5% 1/10W
R514	1-216-057-00	METAL	2.2K 5% 1/10W	R584	1-216-061-00	METAL	3.3K 5% 1/10W
R515	1-216-033-00	METAL	220 5% 1/10W	R585	1-216-053-00	METAL	1.5K 5% 1/10W
R516	1-216-033-00	METAL	220 5% 1/10W	R586	1-216-022-00	METAL	75 5% 1/10W
R517	1-216-033-00	METAL	220 5% 1/10W	R587	1-216-073-00	METAL	10K 5% 1/10W
R518	1-216-033-00	METAL	220 5% 1/10W	R590	1-216-037-00	METAL	330 5% 1/10W
R519	1-216-057-00	METAL	2.2K 5% 1/10W	R591	1-216-037-00	METAL	330 5% 1/10W
R520	1-216-033-00	METAL	220 5% 1/10W	R601	1-216-050-00	METAL	1.1K 5% 1/10W
R521	1-216-033-00	METAL	220 5% 1/10W	R602	1-216-063-00	METAL	3.9K 5% 1/10W
R522	1-216-057-00	METAL	2.2K 5% 1/10W	R603	1-216-059-00	METAL	2.7K 5% 1/10W
R523	1-216-057-00	METAL	2.2K 5% 1/10W	R604	1-216-051-00	METAL	1.2K 5% 1/10W
R524	1-216-057-00	METAL	2.2K 5% 1/10W	R605	1-216-046-00	METAL	750 5% 1/10W
R526	1-216-295-11	METAL	0 5% 1/10W	R606	1-216-041-00	METAL	470 5% 1/10W
R527	1-216-053-00	METAL	1.5K 5% 1/10W	R607	1-216-041-00	METAL	470 5% 1/10W
R528	1-216-033-00	METAL	220 5% 1/10W	R632	1-216-295-11	METAL	0 5% 1/10W
R529	1-216-057-00	METAL	2.2K 5% 1/10W	R633	1-216-295-11	METAL	0 5% 1/10W
R530	1-216-049-00	METAL	1K 5% 1/10W	R634	1-216-295-11	METAL	0 5% 1/10W
R531	1-216-057-00	METAL	2.2K 5% 1/10W	R803	1-216-049-00	METAL	1K 5% 1/10W
R532	1-216-049-00	METAL	1K 5% 1/10W	R804	1-216-065-00	METAL	4.7K 5% 1/10W
R534	1-216-033-00	METAL	220 5% 1/10W	R805	1-216-059-00	METAL	2.7K 5% 1/10W
R535	1-216-033-00	METAL	220 5% 1/10W	R806	1-216-057-00	METAL	2.2K 5% 1/10W
R536	1-216-033-00	METAL	220 5% 1/10W	R901	1-216-049-00	METAL	1K 5% 1/10W
R537	1-216-049-00	METAL	1K 5% 1/10W	R902	1-216-049-00	METAL	1K 5% 1/10W
R538	1-216-049-00	METAL	1K 5% 1/10W	R903	1-216-057-00	METAL	2.2K 5% 1/10W
R539	1-216-685-11	METAL	27K 0.50% 1/10W	R905	1-216-057-00	METAL	2.2K 5% 1/10W
R540	1-216-049-00	METAL	1K 5% 1/10W	R906	1-216-033-00	METAL	220 5% 1/10W
R541	1-216-049-00	METAL	1K 5% 1/10W	R907	1-216-057-00	METAL	2.2K 5% 1/10W
R542	1-216-049-00	METAL	1K 5% 1/10W	R908	1-216-057-00	METAL	2.2K 5% 1/10W
R543	1-216-057-00	METAL	2.2K 5% 1/10W	R910	1-216-073-00	METAL	10K 5% 1/10W

VA-76(B)

DUS-12

FMY-13/13P

Ref.No	Part No.	Description	Remark		
R911	1-216-073-00	METAL	10K	5%	1/10W
R915	1-216-049-00	METAL	1K	5%	1/10W
R916	1-216-057-00	METAL	2.2K	5%	1/10W
R917	1-216-049-00	METAL	1K	5%	1/10W
R934	1-216-041-00	METAL	470	5%	1/10W
R935	1-216-055-00	METAL	1.8K	5%	1/10W
R936	1-216-055-00	METAL	1.8K	5%	1/10W
R937	1-216-045-00	METAL	680	5%	1/10W
R938	1-216-045-00	METAL	680	5%	1/10W
R939	1-216-041-00	METAL	470	5%	1/10W
R941	1-216-295-11	METAL	0	5%	1/10W
R943	1-216-295-11	METAL	0	5%	1/10W
R945	1-216-295-11	METAL	0	5%	1/10W
R950	1-216-041-00	METAL	470	5%	1/10W
R951	1-216-097-00	METAL	100K	5%	1/10W
R952	1-216-065-00	METAL	4.7K	5%	1/10W
R954	1-216-065-00	METAL	4.7K	5%	1/10W
R960	1-216-059-00	METAL	2.7K	5%	1/10W
R982	1-216-049-00	METAL	1K	5%	1/10W
R983	1-216-049-00	METAL	1K	5%	1/10W
R984	1-216-049-00	METAL	1K	5%	1/10W
		<VARIABLE RESISTOR>			
RV301	1-238-852-11	RES, ADJ, CERMET	470		
RV302	1-238-852-11	RES, ADJ, CERMET	470		
RV303	1-238-852-11	RES, ADJ, CERMET	470		
RV304	1-238-852-11	RES, ADJ, CERMET	470		
		<CRYSTAL>			
X101	1-760-193-11	VIBRATOR, CRYSTAL			
X102	1-579-780-21	VIBRATOR, CRYSTAL			
X301	1-579-661-21	OSCILLATOR, CRYSTAL			

	*A-8275-445-A	DUS-12 BOARD, COMPLETE			

		<CAPACITOR>			
C901	1-165-319-11	CERAMIC	0.1uF		50V
		<CONNECTOR>			
CN907	1-506-468-11	PIN, CONNECTOR	3P		
CN908	1-506-468-11	PIN, CONNECTOR	3P		
CN911	1-506-470-11	PIN, CONNECTOR	5P		
CN912	1-506-467-11	PIN, CONNECTOR	2P		
		<IC>			
IC901	8-759-633-10	IC M54544AL			
IC902	8-759-988-13	IC UPC393G2			
		<JUMPER>			
JR900	1-216-296-00	METAL GLAZE	0	5%	1/8W
JR903	1-216-296-00	METAL GLAZE	0	5%	1/8W
JR904	1-216-296-00	METAL GLAZE	0	5%	1/8W
		<RESISTOR>			
R901	1-216-037-00	METAL	330	5%	1/10W
R902	1-216-085-00	METAL	33K	5%	1/10W
R903	1-216-085-00	METAL	33K	5%	1/10W
R904	1-216-081-00	METAL	22K	5%	1/10W
R905	1-216-073-00	METAL	10K	5%	1/10W
R906	1-216-105-00	METAL	220K	5%	1/10W
R907	1-216-089-91	METAL	47K	5%	1/10W

Ref.No	Part No.	Description	Remark		
R908	1-216-097-00	METAL	100K	5%	1/10W
R909	1-216-097-00	METAL	100K	5%	1/10W
R924	1-216-041-00	METAL	470	5%	1/10W
R925	1-216-041-00	METAL	470	5%	1/10W

	*A-8274-829-A	FMY-13 BOARD, COMPLETE (UP-1200A)			
	*A-8274-822-A	FMY-13P BOARD, COMPLETE (UP-1200AEPM)			

		<BUZZER>			
BZ901	1-529-069-11	BUZZER, PIEZOELECTRIC			
		<CAPACITOR>			
C102	1-163-227-11	CERAMIC	10PF		50V
C103	1-126-204-11	ELECT	47uF	20%	16V
C104	1-163-038-00	CERAMIC	0.1uF		25V
C105	1-163-038-00	CERAMIC	0.1uF		25V
C106	1-163-038-00	CERAMIC	0.1uF		25V
C108	1-163-038-00	CERAMIC	0.1uF		25V
C110	1-126-217-11	ELECT	15uF	20%	10V
C111	1-163-038-00	CERAMIC	0.1uF		25V
C112	1-163-117-00	CERAMIC	100PF	5%	50V
C113	1-126-217-11	ELECT	15uF	20%	10V
C114	1-163-038-00	CERAMIC	0.1uF		25V
C115	1-126-217-11	ELECT	15uF	20%	10V
C116	1-163-038-00	CERAMIC	0.1uF		25V
C202	1-163-227-11	CERAMIC	10PF		50V
C204	1-163-038-00	CERAMIC	0.1uF		25V
C205	1-163-038-00	CERAMIC	0.1uF		25V
C206	1-163-038-00	CERAMIC	0.1uF		25V
C208	1-163-038-00	CERAMIC	0.1uF		25V
C210	1-126-217-11	ELECT	15uF	20%	10V
C211	1-163-038-00	CERAMIC	0.1uF		25V
C212	1-163-117-00	CERAMIC	100PF	5%	50V
C213	1-126-217-11	ELECT	15uF	20%	10V
C214	1-163-038-00	CERAMIC	0.1uF		25V
C215	1-126-217-11	ELECT	15uF	20%	10V
C216	1-163-038-00	CERAMIC	0.1uF		25V
C302	1-163-227-11	CERAMIC	10PF		50V
C304	1-163-038-00	CERAMIC	0.1uF		25V
C305	1-163-038-00	CERAMIC	0.1uF		25V
C306	1-163-038-00	CERAMIC	0.1uF		25V
C308	1-163-038-00	CERAMIC	0.1uF		25V
C310	1-126-217-11	ELECT	15uF	20%	10V
C311	1-163-038-00	CERAMIC	0.1uF		25V
C312	1-163-117-00	CERAMIC	100PF	5%	50V
C313	1-126-217-11	ELECT	15uF	20%	10V
C314	1-163-038-00	CERAMIC	0.1uF		25V
C315	1-126-217-11	ELECT	15uF	20%	10V
C316	1-163-038-00	CERAMIC	0.1uF		25V
C401	1-163-038-00	CERAMIC	0.1uF		25V
C402	1-163-038-00	CERAMIC	0.1uF		25V
C403	1-163-038-00	CERAMIC	0.1uF		25V
C404	1-163-038-00	CERAMIC	0.1uF		25V
C406	1-163-038-00	CERAMIC	0.1uF		25V
C407	1-163-038-00	CERAMIC	0.1uF		25V
C408	1-163-038-00	CERAMIC	0.1uF		25V
C409	1-163-038-00	CERAMIC	0.1uF		25V
C410	1-126-204-11	ELECT	47uF	20%	16V
C411	1-126-204-11	ELECT	47uF	20%	16V
C412	1-126-204-11	ELECT	47uF	20%	16V
C413	1-163-038-00	CERAMIC	0.1uF		25V
C414	1-163-038-00	CERAMIC	0.1uF		25V

FMY-13/13P

Ref.No	Part No.	Description	Remark	Ref.No	Part No.	Description	Remark
C415	1-126-204-11	ELECT	47uF 20% 16V	C603	1-163-037-11	CERAMIC	0.022uF 10% 25V
C416	1-163-038-00	CERAMIC	0.1uF 25V	C604	1-128-065-11	ELECT	68uF 20% 10V
C417	1-163-038-00	CERAMIC	0.1uF 25V	C605	1-163-037-11	CERAMIC	0.022uF 10% 25V
C418	1-163-038-00	CERAMIC	0.1uF 25V	C606	1-126-204-11	ELECT	47uF 20% 16V
C420	1-164-004-11	CERAMIC	0.1uF 10% 25V	C607	1-163-037-11	CERAMIC	0.022uF 10% 25V
C421	1-163-132-00	CERAMIC	430PF 5% 50V	C608	1-126-204-11	ELECT	47uF 20% 16V
C422	1-163-113-00	CERAMIC	68PF 5% 50V	C706	1-163-038-91	CERAMIC	0.1uF 25V
C423	1-163-113-00	CERAMIC	68PF 5% 50V	C901	1-163-038-00	CERAMIC	0.1uF 25V
C424	1-163-113-00	CERAMIC	68PF 5% 50V	C902	1-163-038-00	CERAMIC	0.1uF 25V
C425	1-163-113-00	CERAMIC	68PF 5% 50V	C903	1-163-038-00	CERAMIC	0.1uF 25V
C426	1-163-113-00	CERAMIC	68PF 5% 50V	C904	1-163-038-00	CERAMIC	0.1uF 25V
C427	1-163-113-00	CERAMIC	68PF 5% 50V	C905	1-163-038-00	CERAMIC	0.1uF 25V
C428	1-163-113-00	CERAMIC	68PF 5% 50V	C906	1-163-097-00	CERAMIC	15PF 5% 50V
C429	1-163-113-00	CERAMIC	68PF 5% 50V	C907	1-163-097-00	CERAMIC	15PF 5% 50V
C430	1-163-113-00	CERAMIC	68PF 5% 50V	C909	1-128-065-11	ELECT	68uF 20% 10V
C440	1-163-133-00	CERAMIC	47uF 5% 50V	C910	1-163-038-00	CERAMIC	0.1uF 25V
C441	1-163-275-11	CERAMIC	0.001MF 5% 50V	C911	1-163-038-00	CERAMIC	0.1uF 25V
C442	1-163-097-00	CERAMIC	15PF 5% 50V	C912	1-163-038-00	CERAMIC	0.1uF 25V
C443	1-163-275-11	CERAMIC	0.001MF 5% 50V	<CONNECTOR>			
C444	1-163-243-11	CERAMIC	47uF 5% 50V	CN1	1-565-212-11	CONNECTOR, FPC (ZIF)	26P
C445	1-163-275-11	CERAMIC	0.001MF 5% 50V	CN2	1-565-212-11	CONNECTOR, FPC (ZIF)	26P
C446	1-163-275-11	CERAMIC	0.001MF 5% 50V	CN4	1-566-532-11	CONNECTOR, FPC (ZIF)	16P
C447	1-163-275-11	CERAMIC	0.001MF 5% 50V	CN5	1-566-523-11	CONNECTOR, FPC (ZIF)	7P
C449	1-163-097-00	CERAMIC	15PF 5% 50V (UP-1200AEPM)	CN6	1-506-486-11	PIN, CONNECTOR	7P
C501	1-164-346-11	CERAMIC	1uF 16V	CN7	1-506-486-11	PIN, CONNECTOR	7P
C502	1-164-346-11	CERAMIC	1uF 16V	CN8	*1-564-031-00	PIN, CONNECTOR	6P
C503	1-164-346-11	CERAMIC	1uF 16V	CN9	1-506-469-11	PIN, CONNECTOR	4P
C504	1-164-346-11	CERAMIC	1uF 16V	CN10	1-506-469-11	PIN, CONNECTOR	4P
C505	1-164-346-11	CERAMIC	1uF 16V	<DIODE>			
C506	1-164-346-11	CERAMIC	1uF 16V	D101	8-719-820-41	DIODE 1SS302	
C507	1-163-038-00	CERAMIC	0.1uF 25V	D201	8-719-820-41	DIODE 1SS302	
C508	1-126-204-11	ELECT	47uF 20% 16V	D301	8-719-820-41	DIODE 1SS302	
C519	1-163-109-00	CERAMIC	47PF 5% 50V	D901	8-719-400-18	DIODE MA152WK	
C520	1-163-109-00	CERAMIC	47PF 5% 50V	D903	8-719-104-34	DIODE 1S2836	
C521	1-163-117-00	CERAMIC	100PF 5% 50V	<FERRITE, BEAD>			
C522	1-163-038-00	CERAMIC	0.1uF 25V	FB137	1-412-390-21	INDUCTOR CHIP OUH	
C523	1-163-038-00	CERAMIC	0.1uF 25V	FB138	1-412-390-21	INDUCTOR CHIP OUH	
C526	1-163-037-11	CERAMIC	0.022uF 10% 25V	FB139	1-412-390-21	INDUCTOR CHIP OUH	
C527	1-163-038-00	CERAMIC	0.1uF 25V	FB140	1-412-390-21	INDUCTOR CHIP OUH	
C528	1-163-038-00	CERAMIC	0.1uF 25V	FB141	1-412-390-21	INDUCTOR CHIP OUH	
C529	1-126-204-11	ELECT	47uF 20% 16V	FB142	1-412-390-21	INDUCTOR CHIP OUH	
C530	1-164-346-11	CERAMIC	1uF 16V	FB143	1-412-390-21	INDUCTOR CHIP OUH	
C531	1-163-109-00	CERAMIC	47PF 5% 50V	FB144	1-412-390-21	INDUCTOR CHIP OUH	
C532	1-163-235-11	CERAMIC	22PF 5% 50V	FB145	1-412-390-21	INDUCTOR CHIP OUH	
C533	1-163-101-00	CERAMIC	22PF 5% 50V	FB147	1-412-390-21	INDUCTOR CHIP OUH	
C534	1-126-204-11	ELECT	47uF 20% 16V	FB149	1-412-390-21	INDUCTOR CHIP OUH	
C535	1-163-038-00	CERAMIC	0.1uF 25V	FB150	1-412-390-21	INDUCTOR CHIP OUH	
C536	1-163-109-00	CERAMIC	47PF 5% 50V	FB151	1-412-390-21	INDUCTOR CHIP OUH	
C537	1-163-038-00	CERAMIC	0.1uF 25V	FB152	1-412-390-21	INDUCTOR CHIP OUH	
C538	1-163-038-00	CERAMIC	0.1uF 25V	FB153	1-412-390-21	INDUCTOR CHIP OUH	
C539	1-163-038-00	CERAMIC	0.1uF 25V	FB154	1-412-390-21	INDUCTOR CHIP OUH	
C540	1-163-038-00	CERAMIC	0.1uF 25V	<IC>			
C541	1-163-038-00	CERAMIC	0.1uF 25V	IC101	8-752-337-04	IC CXD1176Q	
C542	1-163-038-00	CERAMIC	0.1uF 25V	IC201	8-752-337-04	IC CXD1176Q	
C543	1-163-038-00	CERAMIC	0.1uF 25V	IC301	8-752-337-04	IC CXD1176Q	
C544	1-163-038-00	CERAMIC	0.1uF 25V	IC401	8-759-093-19	IC CXD8444Q	
C545	1-126-204-11	ELECT	47uF 20% 16V	IC402	8-752-338-46	IC CXD1178Q	
C546	1-163-038-00	CERAMIC	0.1uF 25V	IC403	8-752-093-18	IC UPD23C1001EAGW-355E2	
C547	1-163-038-00	CERAMIC	0.1uF 25V	IC404	8-752-093-17	IC UPD23C1001EAGW-354E2	
C548	1-163-038-00	CERAMIC	0.1uF 25V	IC405	8-759-038-00	IC MC74HC574AF	
C549	1-163-113-00	CERAMIC	68PF 5% 50V	IC410	8-759-927-29	IC SN74HCU04ANS-E05	
C550	1-163-038-91	CERAMIC	0.1MF 5% 25V	IC411	8-759-033-16	IC MC74F74M	
C551	1-163-038-91	CERAMIC	0.1MF 5% 25V				
C601	1-163-037-11	CERAMIC	0.022uF 10% 25V				
C602	1-128-065-11	ELECT	68uF 20% 10V				

FMY-13/13P

Ref.No	Part No.	Description	Remark	Ref.No	Part No.	Description	Remark
IC501	8-759-352-14	IC HM51L240CS7-EL		R145	1-216-033-00	METAL	220 5% 1/10W
IC502	8-759-352-14	IC HM51L240CS7-EL		R146	1-216-053-00	METAL	1.5K 5% 1/10W
IC503	8-759-352-14	IC HM51L240CS7-EL		R147	1-216-295-11	METAL	0 5% 1/10W
IC504	8-759-093-89	IC HM51L240AS7-EL		R201	1-216-022-00	METAL	75 5% 1/10W
IC505	8-759-093-89	IC HM51L240AS7-EL		R204	1-216-017-00	METAL	47 5% 1/10W
IC506	8-759-093-89	IC HM51L240AS7-EL		R205	1-216-033-00	METAL	220 5% 1/10W
IC507	8-759-114-07	IC UPD65013GF-407-3BA		R206	1-216-033-00	METAL	220 5% 1/10W
IC508	8-759-114-09	IC UPD65006GF-250-3B8		R207	1-216-033-00	METAL	220 5% 1/10W
IC509	8-759-084-15	IC CXD8391Q		R208	1-216-033-00	METAL	220 5% 1/10W
IC510	8-759-339-89	IC HD6475328F-UP12V111 (UP-1200A)		R209	1-216-033-00	METAL	220 5% 1/10W
IC510	8-759-332-55	IC HD6435368SW08F (UP-1200AEPM)		R210	1-216-033-00	METAL	220 5% 1/10W
IC511	8-759-992-78	IC 74F257ASJ		R211	1-216-033-00	METAL	220 5% 1/10W
IC512	8-759-989-03	IC 74F32SJ		R212	1-216-033-00	METAL	220 5% 1/10W
IC513	8-759-989-03	IC 74F32SJ		R229	1-216-033-00	METAL	220 5% 1/10W
IC514	8-759-948-02	IC 74F86SJ		R230	1-216-041-00	METAL	470 5% 1/10W
IC515	8-759-948-01	IC 74F04SJ		R231	1-216-041-00	METAL	470 5% 1/10W
IC516	8-759-989-01	IC 74F08SJ-T5L		R232	1-216-041-00	METAL	470 5% 1/10W
IC901	8-759-325-71	IC MB89098PFV-G-114-BND		R233	1-216-041-00	METAL	470 5% 1/10W
IC902	8-759-937-56	IC S-8054ALB-LM-S		R234	1-216-041-00	METAL	470 5% 1/10W
		<INDUCTOR>		R235	1-216-041-00	METAL	470 5% 1/10W
L600	1-424-090-11	COIL, LINE FILTER		R236	1-216-041-00	METAL	470 5% 1/10W
L601	1-424-090-11	COIL, LINE FILTER		R237	1-216-041-00	METAL	470 5% 1/10W
L602	1-424-090-11	COIL, LINE FILTER		R240	1-216-009-00	METAL	22 5% 1/10W
L900	1-424-090-11	COIL, LINE FILTER		R241	1-216-025-00	METAL	100 5% 1/10W
L901	1-424-090-11	COIL, LINE FILTER		R242	1-216-073-00	METAL	10K 5% 1/10W
		<TRANSISTOR>		R243	1-216-073-00	METAL	10K 5% 1/10W
Q101	8-729-010-75	TRANSISTOR MSC4116-BC		R244	1-216-053-00	METAL	1.5K 5% 1/10W
Q102	8-729-402-84	TRANSISTOR XN4601		R245	1-216-033-00	METAL	220 5% 1/10W
Q201	8-729-010-75	TRANSISTOR MSC4116-BC		R246	1-216-053-00	METAL	1.5K 5% 1/10W
Q202	8-729-402-84	TRANSISTOR XN4601		R247	1-216-295-11	METAL	0 5% 1/10W
Q301	8-729-010-75	TRANSISTOR MSC4116-BC		R301	1-216-022-00	METAL	75 5% 1/10W
Q302	8-729-402-84	TRANSISTOR XN4601		R304	1-216-017-00	METAL	47 5% 1/10W
Q401	8-729-901-01	TRANSISTOR DTC144EK		R305	1-216-033-00	METAL	220 5% 1/10W
Q440	8-729-230-63	TRANSISTOR 2SC4116YG		R306	1-216-033-00	METAL	220 5% 1/10W
Q441	8-729-230-63	TRANSISTOR 2SC4116YG		R307	1-216-033-00	METAL	220 5% 1/10W
Q442	8-729-230-63	TRANSISTOR 2SC4116YG		R308	1-216-033-00	METAL	220 5% 1/10W
Q902	8-729-901-01	TRANSISTOR DTC144EK		R309	1-216-033-00	METAL	220 5% 1/10W
Q903	8-729-901-01	TRANSISTOR DTC144EK		R310	1-216-033-00	METAL	220 5% 1/10W
		<RESISTOR>		R311	1-216-033-00	METAL	220 5% 1/10W
R101	1-216-022-00	METAL	75 5% 1/10W	R312	1-216-033-00	METAL	220 5% 1/10W
R104	1-216-017-00	METAL	47 5% 1/10W	R329	1-216-033-00	METAL	220 5% 1/10W
R105	1-216-033-00	METAL	220 5% 1/10W	R330	1-216-041-00	METAL	470 5% 1/10W
R106	1-216-033-00	METAL	220 5% 1/10W	R331	1-216-041-00	METAL	470 5% 1/10W
R107	1-216-033-00	METAL	220 5% 1/10W	R332	1-216-041-00	METAL	470 5% 1/10W
R108	1-216-033-00	METAL	220 5% 1/10W	R333	1-216-041-00	METAL	470 5% 1/10W
R109	1-216-033-00	METAL	220 5% 1/10W	R334	1-216-041-00	METAL	470 5% 1/10W
R110	1-216-033-00	METAL	220 5% 1/10W	R335	1-216-041-00	METAL	470 5% 1/10W
R111	1-216-033-00	METAL	220 5% 1/10W	R336	1-216-041-00	METAL	470 5% 1/10W
R112	1-216-033-00	METAL	220 5% 1/10W	R337	1-216-041-00	METAL	470 5% 1/10W
R129	1-216-033-00	METAL	220 5% 1/10W	R340	1-216-009-00	METAL	22 5% 1/10W
R130	1-216-041-00	METAL	470 5% 1/10W	R341	1-216-025-00	METAL	100 5% 1/10W
R131	1-216-041-00	METAL	470 5% 1/10W	R342	1-216-073-00	METAL	10K 5% 1/10W
R132	1-216-041-00	METAL	470 5% 1/10W	R343	1-216-073-00	METAL	10K 5% 1/10W
R133	1-216-041-00	METAL	470 5% 1/10W	R344	1-216-053-00	METAL	1.5K 5% 1/10W
R134	1-216-041-00	METAL	470 5% 1/10W	R345	1-216-033-00	METAL	220 5% 1/10W
R135	1-216-041-00	METAL	470 5% 1/10W	R346	1-216-053-00	METAL	1.5K 5% 1/10W
R136	1-216-041-00	METAL	470 5% 1/10W	R347	1-216-295-11	METAL	0 5% 1/10W
R137	1-216-041-00	METAL	470 5% 1/10W	R401	1-216-295-11	METAL	0 5% 1/10W
R140	1-216-009-00	METAL	22 5% 1/10W	R402	1-216-017-00	METAL	47 5% 1/10W
R141	1-216-025-00	METAL	100 5% 1/10W	R403	1-216-032-00	METAL	200 5% 1/10W
R142	1-216-073-00	METAL	10K 5% 1/10W	R404	1-216-032-00	METAL	200 5% 1/10W
R143	1-216-073-00	METAL	10K 5% 1/10W	R405	1-216-032-00	METAL	200 5% 1/10W
R144	1-216-053-00	METAL	1.5K 5% 1/10W	R406	1-216-061-00	METAL	3.3K 5% 1/10W
				R422	1-216-065-00	METAL	4.7K 5% 1/10W
				R423	1-216-295-11	METAL	0 5% 1/10W
				R424	1-216-295-11	METAL	0 5% 1/10W

FMY-13/13P

Ref.No	Part No.	Description	Remark			Ref.No	Part No.	Description	Remark		
R426	1-216-295-11	METAL	0	5%	1/10W	R575	1-216-017-00	METAL	47	5%	1/10W
R427	1-216-069-00	METAL	6.8K	5%	1/10W	R576	1-216-049-00	METAL	1K	5%	1/10W
R428	1-216-069-00	METAL	6.8K	5%	1/10W	R578	1-216-295-11	METAL	0	5%	1/10W
R429	1-216-049-00	METAL	1K	5%	1/10W	R579	1-216-295-11	METAL	0	5%	1/10W
R430	1-216-295-11	METAL	0	5%	1/10W	R580	1-216-073-00	METAL	10K	5%	1/10W
R440	1-216-295-11	METAL	0	5%	1/10W	R582	1-216-295-11	METAL	0	5%	1/10W
R441	1-216-295-11	METAL	0	5%	1/10W	R583	1-216-033-00	METAL	220	5%	1/10W
R442	1-216-073-00	METAL	10K	5%	1/10W	R584	1-216-033-00	METAL	220	5%	1/10W
R443	1-216-061-00	METAL	3.3K	5%	1/10W	R585	1-216-033-00	METAL	220	5%	1/10W
R444	1-216-037-00	METAL	330	5%	1/10W	R586	1-216-033-00	METAL	220	5%	1/10W
R445	1-216-025-91	METAL	100	5%	1/10W	R587	1-216-033-00	METAL	220	5%	1/10W
R446	1-216-077-00	METAL	15K	5%	1/10W	R588	1-216-033-00	METAL	220	5%	1/10W
R447	1-216-073-00	METAL	10K	5%	1/10W	R589	1-216-033-00	METAL	220	5%	1/10W
R448	1-216-033-00	METAL	220	5%	1/10W	R590	1-216-033-00	METAL	220	5%	1/10W
R449	1-216-037-00	METAL	330	5%	1/10W	R591	1-216-033-00	METAL	220	5%	1/10W
R450	1-216-033-00	METAL	220	5%	1/10W	R592	1-216-033-00	METAL	220	5%	1/10W
R451	1-216-077-00	METAL	15K	5%	1/10W	R593	1-216-033-00	METAL	220	5%	1/10W
R452	1-216-073-00	METAL	10K	5%	1/10W	R594	1-216-033-00	METAL	220	5%	1/10W
R453	1-216-033-00	METAL	220	5%	1/10W	R595	1-216-033-00	METAL	220	5%	1/10W
R454	1-216-037-00	METAL	330	5%	1/10W	R596	1-216-033-00	METAL	220	5%	1/10W
R455	1-216-033-00	METAL	220	5%	1/10W	R597	1-216-033-00	METAL	220	5%	1/10W
R456	1-216-121-00	METAL	1M	5%	1/10W	R598	1-216-033-00	METAL	220	5%	1/10W
R457	1-216-121-00	METAL	1M	5%	1/10W	R599	1-216-033-00	METAL	220	5%	1/10W
R458	1-216-121-00	METAL	1M	5%	1/10W	R600	1-216-033-00	METAL	220	5%	1/10W
R459	1-216-295-11	METAL	0	5%	1/10W	R601	1-216-049-00	METAL	1K	5%	1/10W
R471	1-216-295-11	METAL	0	5%	1/10W	R602	1-216-033-00	METAL	220	5%	1/10W
R474	1-216-295-11	METAL	0	5%	1/10W	R603	1-216-033-00	METAL	220	5%	1/10W
R476	1-216-295-11	METAL	0	5%	1/10W	R604	1-216-033-00	METAL	220	5%	1/10W
R478	1-216-121-00	METAL	1M	5%	1/10W	R605	1-216-033-00	METAL	220	5%	1/10W
R501	1-216-017-00	METAL	47	5%	1/10W	R606	1-216-033-00	METAL	220	5%	1/10W
R502	1-216-017-00	METAL	47	5%	1/10W	R607	1-216-033-00	METAL	220	5%	1/10W
R503	1-216-017-00	METAL	47	5%	1/10W	R608	1-216-033-00	METAL	220	5%	1/10W
R504	1-216-017-00	METAL	47	5%	1/10W	R609	1-216-033-00	METAL	220	5%	1/10W
R505	1-216-017-00	METAL	47	5%	1/10W	R610	1-216-033-00	METAL	220	5%	1/10W
R506	1-216-017-00	METAL	47	5%	1/10W	R611	1-216-033-00	METAL	220	5%	1/10W
R507	1-216-017-00	METAL	47	5%	1/10W	R612	1-216-033-00	METAL	220	5%	1/10W
R508	1-216-017-00	METAL	47	5%	1/10W	R613	1-216-033-00	METAL	220	5%	1/10W
R509	1-216-017-00	METAL	47	5%	1/10W	R614	1-216-033-00	METAL	220	5%	1/10W
R510	1-216-017-00	METAL	47	5%	1/10W	R615	1-216-033-00	METAL	220	5%	1/10W
R511	1-216-049-00	METAL	1K	5%	1/10W	R616	1-216-033-00	METAL	220	5%	1/10W
R512	1-216-049-00	METAL	1K	5%	1/10W	R617	1-216-033-00	METAL	220	5%	1/10W
R513	1-216-017-00	METAL	47	5%	1/10W	R618	1-216-033-00	METAL	220	5%	1/10W
R514	1-216-017-00	METAL	47	5%	1/10W	R619	1-216-033-00	METAL	220	5%	1/10W
R515	1-216-017-00	METAL	47	5%	1/10W	R620	1-216-295-11	METAL	0	5%	1/10W
R517	1-216-017-00	METAL	47	5%	1/10W	R621	1-216-295-11	METAL	0	5%	1/10W
R518	1-216-017-00	METAL	47	5%	1/10W	R622	1-216-295-11	METAL	0	5%	1/10W
R519	1-216-025-00	METAL	100	5%	1/10W	R623	1-216-295-11	METAL	0	5%	1/10W
R525	1-216-017-00	METAL	47	5%	1/10W	R624	1-216-295-11	METAL	0	5%	1/10W
R526	1-216-017-00	METAL	47	5%	1/10W	R625	1-216-295-11	METAL	0	5%	1/10W
R527	1-216-049-00	METAL	1K	5%	1/10W	R626	1-216-295-11	METAL	0	5%	1/10W
R530	1-216-041-00	METAL	470	5%	1/10W	R627	1-216-295-11	METAL	0	5%	1/10W
R531	1-216-017-00	METAL	47	5%	1/10W	R628	1-216-295-11	METAL	0	5%	1/10W
R532	1-216-017-00	METAL	47	5%	1/10W	R642	1-216-295-11	METAL	0	5%	1/10W
R536	1-216-017-00	METAL	47	5%	1/10W	R643	1-216-065-00	METAL	4.7K	5%	1/10W
R541	1-216-017-00	METAL	47	5%	1/10W	R645	1-216-295-11	METAL	0	5%	1/10W (UP-1200A)
R542	1-216-065-00	METAL	4.7K	5%	1/10W	R647	1-216-295-11	METAL	0	5%	1/10W (UP-1200AEPM)
R551	1-216-295-11	METAL	0	5%	1/10W	R650	1-216-033-00	METAL	220	5%	1/10W
R556	1-216-295-11	METAL	0	5%	1/10W	R651	1-216-295-11	METAL	0	5%	1/10W
R564	1-216-033-00	METAL	220	5%	1/10W	R652	1-216-033-00	METAL	220	5%	1/10W
R565	1-216-033-00	METAL	220	5%	1/10W	R655	1-216-295-11	METAL	0	5%	1/10W
R566	1-216-089-00	METAL	47K	5%	1/10W	R816	1-216-295-11	METAL	0	5%	1/10W
R568	1-216-295-11	METAL	0	5%	1/10W	R817	1-216-295-11	METAL	0	5%	1/10W
R572	1-216-089-91	METAL	47K	5%	1/10W	R818	1-216-295-11	METAL	0	5%	1/10W
R573	1-216-017-00	METAL	47	5%	1/10W	R819	1-216-073-00	METAL	10K	5%	1/10W
R574	1-216-017-00	METAL	47	5%	1/10W	R820	1-216-073-00	METAL	10K	5%	1/10W

FMY-13/13P**HM-22(L)/22P(L)**

Ref.No	Part No.	Description	Remark		
R821	1-216-073-00	METAL	10K	5%	1/10W
R822	1-216-073-00	METAL	10K	5%	1/10W
R823	1-216-295-11	METAL	0	5%	1/10W
R824	1-216-295-11	METAL	0	5%	1/10W
R901	1-216-089-91	METAL	47K	5%	1/10W
R908	1-216-089-91	METAL	47K	5%	1/10W
R910	1-216-089-91	METAL	47K	5%	1/10W
R911	1-216-089-91	METAL	47K	5%	1/10W
R912	1-216-089-91	METAL	47K	5%	1/10W
R915	1-216-089-91	METAL	47K	5%	1/10W
R916	1-216-089-91	METAL	47K	5%	1/10W
R917	1-216-025-00	METAL	100	5%	1/10W
R918	1-216-089-91	METAL	47K	5%	1/10W
R919	1-216-089-91	METAL	47K	5%	1/10W
R920	1-216-025-00	METAL	100	5%	1/10W
R921	1-216-025-00	METAL	100	5%	1/10W
R922	1-216-089-91	METAL	47K	5%	1/10W
R923	1-216-025-00	METAL	100	5%	1/10W
R924	1-216-089-00	METAL	47K	5%	1/10W
R926	1-216-295-11	METAL	0	5%	1/10W
R927	1-216-295-11	METAL	0	5%	1/10W
R928	1-216-109-00	METAL	330K	5%	1/10W
R929	1-216-025-00	METAL	100	5%	1/10W
R931	1-216-025-00	METAL	100	5%	1/10W
R932	1-216-065-00	METAL	4.7K	5%	1/10W
R936	1-216-097-00	METAL	100K	5%	1/10W
R937	1-216-049-00	METAL	1K	5%	1/10W
R939	1-216-065-00	METAL	4.7K	5%	1/10W
R942	1-216-065-00	METAL	4.7K	5%	1/10W
R945	1-216-041-00	METAL	470	5%	1/10W
<CRYSTAL>					
X501	1-579-868-11	VIBRATOR, CRYSTAL			
X901	1-579-550-11	VIBRATOR, CRYSTAL			
XTL901	1-579-369-21	VIBRATOR			

*A-8274-824-A		HM-22(L) BOARD, COMPLETE (UP-1200A)			
*A-8274-819-A		HM-22P(L) BOARD, COMPLETE (UP-1200AEPM)			

<CAPACITOR>					
C701	1-126-950-11	ELECT	330uF	20%	35V
C703	1-165-112-11	CERAMIC	0.33uF		16V
C704	1-165-112-11	CERAMIC	0.33uF		16V
C705	1-124-779-00	ELECT	10uF	20%	16V
C706	1-165-112-11	CERAMIC	0.33uF		16V
C707	1-165-112-11	CERAMIC	0.33uF		16V
C708	1-135-166-21	TANTAL	47uF	20%	6.3V
C711	1-165-112-11	CERAMIC	0.33uF		16V
C712	1-165-112-11	CERAMIC	0.33uF		16V
C713	1-162-970-11	CERAMIC	0.01uF	10%	25V
C714	1-162-970-11	CERAMIC	0.01uF	10%	25V
C715	1-165-112-11	CERAMIC	0.33uF		16V
C716	1-162-970-11	CERAMIC	0.01uF	10%	25V
C717	1-164-360-11	CERAMIC	0.1uF		16V
C718	1-162-970-11	CERAMIC	0.01uF	10%	25V
C719	1-162-970-11	CERAMIC	0.01uF	10%	25V
C720	1-164-360-11	CERAMIC	0.1uF		16V
C721	1-164-360-11	CERAMIC	0.1uF		16V
C722	1-164-360-11	CERAMIC	0.1uF		16V
C723	1-162-970-11	CERAMIC	0.01uF	10%	25V
C724	1-162-970-11	CERAMIC	0.01uF	10%	25V
C725	1-162-970-11	CERAMIC	0.01uF	10%	25V
C726	1-162-970-11	CERAMIC	0.01uF	10%	25V

Ref.No	Part No.	Description	Remark		
C727	1-162-970-11	CERAMIC	0.01uF	10%	25V
C728	1-162-970-11	CERAMIC	0.01uF	10%	25V
C729	1-162-970-11	CERAMIC	0.01uF	10%	25V
C734	1-164-360-11	CERAMIC	0.1uF		16V
C735	1-165-112-11	CERAMIC	0.33uF		16V
C736	1-162-970-11	CERAMIC	0.01uF	10%	25V
C737	1-126-204-11	ELECT	47uF	20%	16V
C738	1-165-112-11	CERAMIC	0.33uF		16V
C739	1-135-166-21	TANTAL	47uF	20%	6.3V
C740	1-165-112-11	CERAMIC	0.33uF		16V
C741	1-165-112-11	CERAMIC	0.33uF		16V
C742	1-126-204-11	ELECT	47uF	20%	16V
C744	1-165-112-11	CERAMIC	0.33uF		16V
C746	1-165-112-11	CERAMIC	0.33uF		16V
C747	1-164-360-11	CERAMIC	0.1uF		16V
C749	1-165-112-11	CERAMIC	0.33uF		16V
C750	1-165-112-11	CERAMIC	0.33uF		16V
C751	1-162-970-11	CERAMIC	0.01uF	10%	25V
C752	1-162-970-11	CERAMIC	0.01uF	10%	25V
C753	1-126-204-11	ELECT	47uF	20%	16V
C754	1-162-945-11	CERAMIC	22PF	5%	50V
C755	1-162-945-11	CERAMIC	22PF	5%	50V
C756	1-165-112-11	CERAMIC	0.33uF		16V
C757	1-162-970-11	CERAMIC	0.01uF	10%	25V
C758	1-162-970-11	CERAMIC	0.01uF	10%	25V
C759	1-162-970-11	CERAMIC	0.01uF	10%	25V
C760	1-162-970-11	CERAMIC	0.01uF	10%	25V
C761	1-162-970-11	CERAMIC	0.01uF	10%	25V
C762	1-162-970-11	CERAMIC	0.01uF	10%	25V
C763	1-162-970-11	CERAMIC	0.01uF	10%	25V
C764	1-162-970-11	CERAMIC	0.01uF	10%	25V
C765	1-162-970-11	CERAMIC	0.01uF	10%	25V
C766	1-162-970-11	CERAMIC	0.01uF	10%	25V
C767	1-162-970-11	CERAMIC	0.01uF	10%	25V
C768	1-164-357-11	CERAMIC	1000PF	5%	50V
C769	1-164-357-11	CERAMIC	1000PF	5%	50V
C770	1-164-360-11	CERAMIC	0.1uF		16V
C771	1-164-360-11	CERAMIC	0.1uF		16V
C776	1-165-112-11	CERAMIC	0.33uF		16V
C777	1-165-112-11	CERAMIC	0.33uF		16V
C778	1-165-112-11	CERAMIC	0.33uF		16V
C779	1-162-939-11	CERAMIC	8PF		50V
C780	1-162-939-11	CERAMIC	8PF		50V
C781	1-162-951-11	CERAMIC	68PF		50V
C782	1-162-951-11	CERAMIC	68PF		50V
C783	1-162-951-11	CERAMIC	68PF		50V
C784	1-162-951-11	CERAMIC	68PF		50V
C785	1-162-951-11	CERAMIC	68PF		50V
<CONNECTOR>					
CN701	*1-580-055-21	PIN, CONNECTOR 2P			
CN702	*1-580-056-21	PIN, CONNECTOR 3P			
CN703	*1-580-056-21	PIN, CONNECTOR 3P			
CN704	*1-580-056-21	PIN, CONNECTOR 3P			
CN705	1-566-537-11	CONNECTOR, FPC (NON ZIF) 5P			
CN706	1-566-523-11	CONNECTOR, FPC (ZIF) 7P			
CN707	1-506-481-11	PIN, CONNECTOR 2P			
CN708	1-506-481-11	PIN, CONNECTOR 2P			
CN709	1-506-485-11	PIN, CONNECTOR 6P			
CN710	1-569-775-21	PIN, CONNECTOR 5P			
CN711	1-569-775-21	PIN, CONNECTOR 5P			
CN712	1-506-481-11	PIN, CONNECTOR 2P			
CN713	1-569-775-21	PIN, CONNECTOR 5P			
CN714	1-566-532-11	CONNECTOR, FPC (ZIF) 16P			

The components identified by shading and mark Δ are critical for safety. Replace only with part number specified.

Les composants identifiés par une trame et une marque Δ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

HM-22(L)/22P(L)

Ref.No	Part No.	Description	Remark	Ref.No	Part No.	Description	Remark
CN715	1-566-526-11	CONNECTOR, FPC (ZIF) 10P		<RESISTOR>			
CN716	1-506-494-11	PIN, CONNECTOR 15P		R701	1-216-829-11	METAL 4.7K 5%	1/16W
CN717	1-566-528-21	CONNECTOR, FPC (ZIF) 12P		R702	1-216-829-11	METAL 4.7K 5%	1/16W
CN718	*1-580-056-21	PIN, CONNECTOR 3P		R703	1-216-829-11	METAL 4.7K 5%	1/16W
CN719	1-506-481-11	PIN, CONNECTOR 2P		R704	1-216-829-11	METAL 4.7K 5%	1/16W
CN722	*1-580-055-21	PIN, CONNECTOR 2P		R705	1-216-818-11	METAL 560 5%	1/16W
CN723	*1-580-056-21	PIN, CONNECTOR 3P		R706	1-216-818-11	METAL 560 5%	1/16W
CN724	1-580-265-11	CONNECTOR, BOARD TO BOARD 16P		R707	1-216-818-11	METAL 560 5%	1/16W
CN725	1-506-481-11	PIN, CONNECTOR 2P		R708	1-216-818-11	METAL 560 5%	1/16W
<DIODE>				R709	1-216-813-11	METAL 220 5%	1/16W
D701	8-719-200-02	DIODE 10E2		R710	1-216-813-11	METAL 220 5%	1/16W
D702	8-719-200-02	DIODE 10E2		R711	1-216-813-11	METAL 220 5%	1/16W
D703	8-719-104-34	DIODE 1S2835		R712	1-216-813-11	METAL 220 5%	1/16W
D704	8-719-104-34	DIODE 1S2835		R713	Δ 1-215-930-11	METAL 10 5%	5W
D705	8-719-104-34	DIODE 1S2835		R715	Δ 1-215-930-11	METAL 10 5%	5W
D706	8-719-104-34	DIODE 1S2835		R716	1-216-841-11	METAL 47K 5%	1/16W
D707	8-719-104-34	DIODE 1S2835		R717	1-216-819-11	METAL 680 5%	1/16W
D709	8-719-104-34	DIODE 1S2835		R718	1-216-809-11	METAL 100 5%	1/16W
D711	8-719-104-34	DIODE 1S2835		R719	1-260-099-11	CARBON 1K 5%	1/2W
<FUSE>				R720	1-216-833-11	METAL 10K 5%	1/16W
FO01	1-532-777-21	FUSE, MICRO (SECONDARY)		R721	1-216-825-11	METAL 2.2K 5%	1/16W
<FILTER>				R722	1-216-815-11	METAL 330 5%	1/16W
FL1	1-239-492-11	FILTER, EMI		R723	1-216-831-11	METAL 6.8K 5%	1/16W
<IC>				R724	1-216-825-11	METAL 2.2K 5%	1/16W
IC701	8-759-154-84	IC HDC443V2		R725	1-216-840-11	METAL 39K 5%	1/16W
IC702	8-759-053-58	IC IDT6116SA25SO		R726	1-216-818-11	METAL 560 5%	1/16W
IC703	8-759-053-58	IC IDT6116SA25SO		R727	1-216-813-11	METAL 220 5%	1/16W
IC704	8-759-344-54	IC IDT6116SA25SO		R728	1-216-839-11	METAL 33K 5%	1/16W
IC706	8-759-998-98	IC LM358D		R729	1-216-841-11	METAL 47K 5%	1/16W
IC707	8-759-085-67	IC LM339NS		R730	1-216-835-11	METAL 15K 5%	1/16W
IC708	8-752-863-53	IC CXP80P116Q		R731	1-216-849-11	METAL 220K 5%	1/16W
IC709	8-759-157-19	IC MB3863PF-G-BND		R732	1-216-833-11	METAL 10K 5%	1/16W
IC710	8-759-925-74	IC SN74HC04ANS		R733	1-216-839-11	METAL 33K 5%	1/16W
IC711	8-759-085-67	IC LM339NS		R734	1-216-840-11	METAL 39K 5%	1/16W
IC712	8-759-085-67	IC LM339NS		R735	1-216-831-11	METAL 6.8K 5%	1/16W
IC713	8-759-927-46	IC SN74HC00ANS		R736	1-216-841-11	METAL 47K 5%	1/16W
IC714	8-759-242-70	IC TC7WU04F		R737	1-216-841-11	METAL 47K 5%	1/16W
<INDUCTOR>				R738	1-216-841-11	METAL 47K 5%	1/16W
L701	1-424-090-11	COIL, LINE FILTER		R739	1-216-841-11	METAL 47K 5%	1/16W
L702	1-424-090-11	COIL, LINE FILTER		R740	1-216-837-11	METAL 22K 5%	1/16W
L703	1-424-090-11	COIL, LINE FILTER		R741	1-216-841-11	METAL 47K 5%	1/16W
L704	1-412-390-21	INDUCTOR CHIP 0UH		R742	1-216-864-11	METAL 0 5%	1/16W
L705	1-412-390-21	INDUCTOR CHIP 0UH		R744	1-216-837-11	METAL 22K 5%	1/16W
L706	1-412-390-21	INDUCTOR CHIP 0UH		R746	1-216-841-11	METAL 47K 5%	1/16W
L707	1-412-390-21	INDUCTOR CHIP 0UH		R747	1-216-849-11	METAL 220K 5%	1/16W
<TRANSISTOR>				R748	1-216-833-11	METAL 10K 5%	1/16W
Q701	8-729-901-04	TRANSISTOR DTA114EK		R750	1-216-841-11	METAL 47K 5%	1/16W
Q702	8-729-901-00	TRANSISTOR DTC124EK		R751	1-216-833-11	METAL 10K 5%	1/16W
Q703	8-729-114-48	TRANSISTOR 2SB962-Z-P		R752	1-216-833-11	METAL 10K 5%	1/16W
Q705	8-729-017-80	TRANSISTOR 2SD992-Z-E2		R753	1-216-813-11	METAL 220 5%	1/16W
Q706	8-729-017-80	TRANSISTOR 2SD992-Z-E2		R754	1-216-837-11	METAL 22K 5%	1/16W
Q707	8-729-017-80	TRANSISTOR 2SD992-Z-E2		R755	1-216-841-11	METAL 47K 5%	1/16W
Q708	8-729-017-80	TRANSISTOR 2SD992-Z-E2		R756	1-216-849-11	METAL 220K 5%	1/16W
Q709	8-729-140-75	TRANSISTOR 2SD999-CLCK		R757	1-216-833-11	METAL 10K 5%	1/16W
Q710	8-729-120-28	TRANSISTOR 2SC1623-L5L6		R758	1-216-821-11	METAL 1K 5%	1/16W
Q711	8-729-120-28	TRANSISTOR 2SC1623-L5L6		R760	1-216-813-11	METAL 220 5%	1/16W
				R761	1-216-837-11	METAL 22K 5%	1/16W
				R762	1-216-841-11	METAL 47K 5%	1/16W
				R763	1-216-821-11	METAL 1K 5%	1/16W
				R764	1-216-849-11	METAL 220K 5%	1/16W
				R765	1-216-833-11	METAL 10K 5%	1/16W
				R766	1-216-839-11	METAL 33K 5%	1/16W
				R767	1-216-821-11	METAL 1K 5%	1/16W
				R768	1-216-821-11	METAL 1K 5%	1/16W

HM-22(L)/22P(L)

Ref.No	Part No.	Description	Remark			Ref.No	Part No.	Description	Remark		
R769	1-216-841-11	METAL	47K	5%	1/16W	R834	1-216-841-11	METAL	47K	5%	1/16W
R770	1-216-841-11	METAL	47K	5%	1/16W	R835	1-216-841-11	METAL	47K	5%	1/16W
						R837	1-216-813-11	METAL	220	5%	1/16W
R771	1-216-841-11	METAL	47K	5%	1/16W						
R772	1-216-841-11	METAL	47K	5%	1/16W	R838	1-216-841-11	METAL	47K	5%	1/16W
R773	1-216-841-11	METAL	47K	5%	1/16W	R839	1-216-841-11	METAL	47K	5%	1/16W
R774	1-216-841-11	METAL	47K	5%	1/16W	R840	1-216-821-11	METAL	1K	5%	1/16W
R775	1-216-841-11	METAL	47K	5%	1/16W	R841	1-216-849-11	METAL	220K	5%	1/16W
						R842	1-216-833-11	METAL	10K	5%	1/16W
R776	1-216-841-11	METAL	47K	5%	1/16W						
R777	1-216-841-11	METAL	47K	5%	1/16W	R843	1-216-839-11	METAL	33K	5%	1/16W
R778	1-216-841-11	METAL	47K	5%	1/16W	R844	1-216-837-11	METAL	22K	5%	1/16W
R779	1-216-813-11	METAL	220	5%	1/16W	R846	1-216-813-11	METAL	220	5%	1/16W
R780	1-216-813-11	METAL	220	5%	1/16W	R847	1-216-841-11	METAL	47K	5%	1/16W
						R848	1-216-841-11	METAL	47K	5%	1/16W
R781	1-216-813-11	METAL	220	5%	1/16W						
R782	1-216-813-11	METAL	220	5%	1/16W	R849	1-216-821-11	METAL	1K	5%	1/16W
R783	1-216-813-11	METAL	220	5%	1/16W	R850	1-216-849-11	METAL	220K	5%	1/16W
R784	1-216-813-11	METAL	220	5%	1/16W	R851	1-216-833-11	METAL	10K	5%	1/16W
R785	1-216-813-11	METAL	220	5%	1/16W	R852	1-216-839-11	METAL	33K	5%	1/16W
						R853	1-216-837-11	METAL	22K	5%	1/16W
R786	1-216-813-11	METAL	220	5%	1/16W						
R787	1-216-813-11	METAL	220	5%	1/16W	R854	1-216-821-11	METAL	1K	5%	1/16W
R788	1-216-813-11	METAL	220	5%	1/16W	R855	1-216-841-11	METAL	47K	5%	1/16W
R789	1-216-837-11	METAL	22K	5%	1/16W	R856	1-216-839-11	METAL	33K	5%	1/16W
R790	1-216-839-11	METAL	33K	5%	1/16W	R857	1-216-815-11	METAL	330	5%	1/16W
						R858	1-216-841-11	METAL	47K	5%	1/16W
R791	1-216-813-11	METAL	220	5%	1/16W						
R792	1-216-813-11	METAL	220	5%	1/16W	R859	1-216-821-11	METAL	1K	5%	1/16W
R793	1-216-838-11	METAL	27K	5%	1/16W	R860	1-216-849-11	METAL	220K	5%	1/16W
R794	1-216-838-11	METAL	27K	5%	1/16W	R861	1-216-833-11	METAL	10K	5%	1/16W
R795	1-216-821-11	METAL	1K	5%	1/16W	R862	1-216-839-11	METAL	33K	5%	1/16W
						R863	1-216-837-11	METAL	22K	5%	1/16W
R796	1-216-821-11	METAL	1K	5%	1/16W						
R797	1-216-837-11	METAL	22K	5%	1/16W	R866	1-216-821-11	METAL	1K	5%	1/16W
R798	1-216-839-11	METAL	33K	5%	1/16W	R867	1-216-821-11	METAL	1K	5%	1/16W
R799	1-216-813-11	METAL	220	5%	1/16W	R868	1-216-829-11	METAL	4.7K	5%	1/16W
R800	1-216-813-11	METAL	220	5%	1/16W	R869	1-216-821-11	METAL	1K	5%	1/16W
						R870	1-216-821-11	METAL	1K	5%	1/16W
R801	1-216-838-11	METAL	27K	5%	1/16W						
R802	1-216-838-11	METAL	27K	5%	1/16W	R871	1-216-821-11	METAL	1K	5%	1/16W
R803	1-216-821-11	METAL	1K	5%	1/16W	R872	1-216-821-11	METAL	1K	5%	1/16W
R804	1-216-821-11	METAL	1K	5%	1/16W	R873	1-216-841-11	METAL	47K	5%	1/16W
R805	1-216-849-11	METAL	220K	5%	1/16W	R874	1-216-841-11	METAL	47K	5%	1/16W
						R879	1-216-809-11	METAL	100	5%	1/16W
R806	1-216-849-11	METAL	220K	5%	1/16W						
R807	1-216-849-11	METAL	220K	5%	1/16W	R880	1-216-841-11	METAL	47K	5%	1/16W
R808	1-216-849-11	METAL	220K	5%	1/16W	R881	1-216-841-11	METAL	47K	5%	1/16W
R809	1-216-837-11	METAL	22K	5%	1/16W	R882	1-216-841-11	METAL	47K	5%	1/16W
R810	1-216-829-11	METAL	4.7K	5%	1/16W	R883	1-216-841-11	METAL	47K	5%	1/16W
						R884	1-216-841-11	METAL	47K	5%	1/16W
R811	1-216-833-11	METAL	10K	5%	1/16W						
R812	1-216-833-11	METAL	10K	5%	1/16W	R885	1-216-841-11	METAL	47K	5%	1/16W
R813	1-216-833-11	METAL	10K	5%	1/16W	R886	1-216-857-11	METAL	1M	5%	1/16W
R814	1-216-833-11	METAL	10K	5%	1/16W	R887	1-216-857-11	METAL	1M	5%	1/16W
R815	1-216-833-11	METAL	10K	5%	1/16W	R888	1-216-841-11	METAL	47K	5%	1/16W
						R889	1-216-841-11	METAL	47K	5%	1/16W
R816	1-216-833-11	METAL	10K	5%	1/16W						
R817	1-216-829-11	METAL	4.7K	5%	1/16W	R891	1-216-819-11	METAL	680	5%	1/16W
R818	1-216-829-11	METAL	4.7K	5%	1/16W	R892	1-216-841-11	METAL	47K	5%	1/16W
R819	1-216-829-11	METAL	4.7K	5%	1/16W	R893	1-216-817-11	METAL	470	5%	1/16W
R820	1-216-829-11	METAL	4.7K	5%	1/16W	R895	1-216-864-11	METAL	0	5%	1/16W
						R896	1-216-813-11	METAL	220	5%	1/10W
R822	1-216-829-11	METAL	4.7K	5%	1/16W						
R823	1-216-829-11	METAL	4.7K	5%	1/16W	R897	1-216-813-11	METAL	220	5%	1/10W
R824	1-216-829-11	METAL	4.7K	5%	1/16W	R898	1-216-813-11	METAL	220	5%	1/10W
R825	1-216-829-11	METAL	4.7K	5%	1/16W	R899	1-216-813-11	METAL	220	5%	1/10W
R826	1-216-841-11	METAL	47K	5%	1/16W	R900	1-216-813-11	METAL	220	5%	1/10W
						R901	1-216-813-11	METAL	220	5%	1/10W
R827	1-216-841-11	METAL	47K	5%	1/16W						
R828	1-216-841-11	METAL	47K	5%	1/16W	R902	1-216-813-11	METAL	220	5%	1/10W
R829	1-216-841-11	METAL	47K	5%	1/16W						
R830	1-216-839-11	METAL	33K	5%	1/16W			<SWITCH>			
R831	1-216-837-11	METAL	22K	5%	1/16W						
						S705	1-692-088-41	SWITHC, TACTILE			
R832	1-216-833-11	METAL	10K	5%	1/16W	S706	1-571-684-11	SWITCH, TACTIL			
R833	1-216-841-11	METAL	47K	5%	1/16W						

HM-22(L)/22P(L)**IF-27****KY-15**

Ref.No	Part No.	Description	Remark
<THERMISTOR>			
TH701	1-809-357-21	THERMISTOR, NTC (2125)	
<CRYSTAL>			
X701	1-579-907-21	VIBRATOR, CERAMIC	
X702	1-579-070-41	VIBRATOR, CRYSTAL	
X703	1-579-906-21	VIBRATOR, CERAMIC	

*A-8275-446-B IF-27 BOARD, COMPLETE			

<CAPACITOR>			
C1	1-163-009-11	CERAMIC 0.001uF 10%	50V
C2	1-163-038-00	CERAMIC 0.1uF	25V
C3	1-124-589-11	ELECT 47uF 20%	16V
<CONNECTOR>			
CN1	1-506-486-11	PIN, CONNECTOR 7P	
CN2	1-506-485-11	PIN, CONNECTOR 6P	
CN3	1-564-014-11	PIN, CONNECTOR 4P	
CN4	1-506-483-21	PIN, CONNECTOR 4P	
<DIODE>			
D1	8-719-400-18	DIODE MA152WK	
D2	8-719-108-12	DIODE RD9.1E-W	
D3	8-719-108-12	DIODE RD9.1E-W	
D4	8-719-108-12	DIODE RD9.1E-W	
D5	8-719-108-12	DIODE RD9.1E-W	
D6	8-719-108-12	DIODE RD9.1E-W	
D7	8-719-108-12	DIODE RD9.1E-W	
D8	8-719-800-76	DIODE 1SS226	
D9	8-719-800-76	DIODE 1SS226	
<FILTER>			
FL1	1-236-738-11	FILTER, EMI	
FL2	1-236-738-11	FILTER, EMI	
FL3	1-236-738-11	FILTER, EMI	
FL4	1-236-738-11	FILTER, EMI	
FL5	1-236-738-11	FILTER, EMI	
FL6	1-236-738-11	FILTER, EMI	
FL7	1-236-738-11	FILTER, EMI	
FL8	1-236-738-11	FILTER, EMI	
FL9	1-236-738-11	FILTER, EMI	
<JACK>			
J1	1-691-274-11	CONNECTOR	
J2	1-691-274-11	CONNECTOR	
J3	1-569-803-11	CONNECTOR, (S) TERMINAL 4P	
J4	1-569-803-11	CONNECTOR, (S) TERMINAL 4P	
J5	1-507-792-00	JACK	
<JUMPER>			
JR1	1-216-296-00	METAL GLAZE 0	5% 1/8W
JR2	1-216-296-00	METAL GLAZE 0	5% 1/8W
JR3	1-216-296-00	METAL GLAZE 0	5% 1/8W
JR4	1-216-295-11	METAL GLAZE 0	5% 1/10W
JR5	1-216-296-00	METAL GLAZE 0	5% 1/8W
JR6	1-216-296-00	METAL GLAZE 0	5% 1/8W
JR7	1-216-296-00	METAL GLAZE 0	5% 1/8W
JR8	1-216-296-00	METAL 0	5% 1/10W
JR9	1-216-296-00	METAL 0	5% 1/10W
JR10	1-216-296-00	METAL 0	5% 1/10W

Ref.No	Part No.	Description	Remark
<TRANSISTOR>			
Q1	8-729-901-01	TRANSISTOR DTC144EK	
Q2	8-729-140-75	TRANSISTOR 2SD999-CLCK	
<RESISTOR>			
R1	1-216-631-11	METAL 150	0.50% 1/10W
R5	1-216-631-11	METAL 150	0.50% 1/10W
R7	1-216-049-00	METAL 1K	5% 1/10W
R8	1-216-089-91	METAL 47K	5% 1/10W
R9	1-216-025-00	METAL 100	5% 1/10W
<VARIABLE, RESISTOR>			
RL1	1-515-622-11	RELAY	
RL2	1-515-622-11	RELAY	
RL3	1-515-622-11	RELAY	
<SWITCH>			
S1	1-572-084-11	SWITCH, SLIDE	

*A-8275-438-A KY-15 BOARD, COMPLETE			

<CAPACITOR>			
C803	1-163-038-00	CERAMIC 0.1uF	25V
C804	1-163-009-11	CERAMIC 0.001uF 10%	50V
C805	1-163-038-00	CERAMIC 0.1uF	25V
C807	1-163-031-11	CERAMIC 0.1uF	50V
<CONNECTOR>			
CN801	*1-506-486-11	PIN, CONNECTOR 7P	
CN802	*1-506-486-11	PIN, CONNECTOR 7P	
CN803	1-506-493-11	PIN, CONNECTOR 14P	
CN805	*1-563-863-21	SOCKET, CONNECTOR 26P	
CN806	1-506-484-11	PIN, CONNECTOR 5P	
<DIODE>			
D802	8-719-800-76	DIODE 1SS226	
D804	8-719-800-76	DIODE 1SS226	
D806	8-719-800-76	DIODE 1SS226	
<IC>			
IC802	8-759-988-13	IC LM393PS-T1	
<JUMPER>			
JR821	1-216-296-00	METAL GLAZE 0	5% 1/8W
JR822	1-216-295-11	METAL GLAZE 0	5% 1/10W
JR824	1-216-296-00	METAL GLAZE 0	5% 1/8W
JR825	1-216-296-00	METAL GLAZE 0	5% 1/8W
JR828	1-216-296-00	METAL GLAZE 0	5% 1/8W
JR831	1-216-296-00	METAL GLAZE 0	5% 1/8W
JR832	1-216-296-00	METAL GLAZE 0	5% 1/8W
JR833	1-216-296-00	METAL GLAZE 0	5% 1/8W
JR834	1-216-296-00	METAL GLAZE 0	5% 1/8W
JR835	1-216-296-00	METAL GLAZE 0	5% 1/8W
<TRANSISTOR>			
Q801	8-729-900-53	TRANSISTOR DTC114EK	
Q802	8-729-900-53	TRANSISTOR DTC114EK	
<RESISTOR>			
R801	1-216-295-11	METAL 0	5% 1/10W
R802	1-216-295-11	METAL 0	5% 1/10W
R803	1-216-295-11	METAL 0	5% 1/10W

KY-15						PTC-27						SU10						S-25						SW-39						SW-41						SW-42						SW-208						SW-210																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																			
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R804	1-216-295-11	METAL	0	5%	1/10W																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																														</

SW-211

SW-212

SW-213

SW-214

SW-215

SW-216

SW-217

SWITCHING REGULATOR

Ref.No	Part No.	Description	Remark
	*A-8275-434-A	SW-211 BOARD, COMPLETE *****	
		<PHOTO INTERRUPTER>	
PH804	8-749-923-97	PHOTO INTERRUPTER GP2S40K	
PH805	8-749-923-97	PHOTO INTERRUPTER GP2S40K	
		<HARNESSE>	
W801	1-648-128-11	PC BOARD, FP-38 FLEXIBLE	

	*A-8275-436-A	SW-212 BOARD, COMPLETE *****	
		<CAPACITOR>	
C810	1-124-779-00	ELECT 10uF 20% 16V	
C811	1-164-004-11	CERAMIC 0.1uF 10% 25V	
C812	1-163-038-00	CERAMIC 0.1uF 25V	
C813	1-128-530-11	ELECT 33uF 20% 10V	
C814	1-126-200-11	ELECT 10uF 20% 16V	
C815	1-164-004-11	CERAMIC 0.1uF 10% 25V	
		<CONNECTOR>	
CN806	1-569-775-11	PIN, CONNECTOR (SMD) 5P	
CN811	1-580-057-11	PIN, CONNECTOR 4P	
CN813	*1-580-056-21	PIN, CONNECTOR (SMD) 3P	
CN814	*1-580-055-21	PIN, CONNECTOR 2P	
		<DIODE>	
D802	8-719-421-15	DIODE MA8027-L	
		<IC>	
IC810	8-759-998-98	IC LM358D	
		<PHOTO INTERRUPTER>	
PH806	8-749-923-97	PHOTO INTERRUPTER GP2S40K	
PH807	8-749-923-97	PHOTO INTERRUPTER GP2S40K	
		<RESISTOR>	
R802	1-216-295-11	METAL 0 5% 1/10W	
R810	1-216-073-00	METAL 10K 5% 1/10W	
R811	1-216-065-00	METAL 4.7K 5% 1/10W	
R812	1-216-073-00	METAL 10K 5% 1/10W	
R813	1-216-089-91	METAL 47K 5% 1/10W	
R814	1-216-089-91	METAL 47K 5% 1/10W	
R815	1-216-065-00	METAL 4.7K 5% 1/10W	
R816	1-216-073-00	METAL 10K 5% 1/10W	
R817	1-216-089-91	METAL 47K 5% 1/10W	
R818	1-216-089-91	METAL 47K 5% 1/10W	
R819	1-216-083-00	METAL 27K 5% 1/10W	
R820	1-216-033-00	METAL 220 5% 1/10W	
R821	1-216-295-11	METAL 0 5% 1/10W	

The components identified by shading and mark Δ are critical for safety.
Replace only with part number specified.

Les composants identifiés par une trame et une marque Δ sont critiques pour la sécurité.
Ne les remplacer que par une pièce portant le numéro spécifié.

Ref.No	Part No.	Description	Remark
	*A-8275-441-A	SW-213 BOARD, COMPLETE *****	
	*3-949-924-01	HOLDER, P SENSOR <CONNECTOR>	
CN808	1-569-775-21	PIN, CONNECTOR 5P <PHOTO INTERRUPTER>	
PH808	8-749-923-97	PHOTO INTERRUPTER GP2S40K	
PH809	8-749-923-97	PHOTO INTERRUPTER GP2S40K	

	*A-8275-453-A	SW-214 BOARD, COMPLETE *****	
		<CONNECTOR>	
CN809	1-580-055-21	PIN, CONNECTOR 2P <SWITCH>	
S801	1-570-407-11	SWITCH, SLIDE	

	*A-8275-435-A	SW-215 BOARD, COMPLETE *****	

	*A-8275-440-A	SW-216 BOARD, COMPLETE *****	

	*A-8275-452-A	SW-217 BOARD, COMPLETE *****	
		<CONNECTOR>	
CN810	*1-580-056-21	PIN, CONNECTOR (SMD) 3P <PHOTO INTERRUPTER>	
PH810	8-749-923-97	PHOTO INTERRUPTER GP2S40K	

	Δ *1-413-942-21	SWITCHING REGULATOR (UP-1200A)	
	Δ *1-413-946-21	SWITCHING REGULATOR (UP-1200AEPM)	

	9-904-821-01	FUSE CLIP	
	*9-907-116-01	HEAT SINK	
	*9-907-118-01	HEAT SINK	
	*9-907-119-01	PC BOARD	
	9-907-120-01	SPACER	
	*9-907-121-01	INSULATION SHEET	
	*9-907-122-01	INSULATION SHEET	
		<CAPACITOR>	
C101	1-136-192-11	CERAMIC 0.33MF 250V	
C102	9-902-038-01	CERAMIC 0.22MF 250V	
C103	9-907-228-01	CERAMIC 470PF 125V	
C104	9-907-095-01	CERAMIC 470PF 125V	
C105	9-907-096-01	CERAMIC 4700PF 250V	

SWITCHING REGULATOR

Ref.No	Part No.	Description	Remark	Ref.No	Part No.	Description	Remark
C106	9-907-097-01	ELECT 470MF 200V		D201	8-719-501-34	DIODE S3VC40R	
C107	9-900-522-01	CERAMIC 2200PF 250V		D202	8-719-501-34	DIODE S3VC40R	
C108	9-900-525-01	CERAMIC 0.047MF 400V		D203	8-719-200-02	DIODE 10E-2	
C109	9-907-098-01	CERAMIC 220PF 1KV		D204	9-900-535-01	DIODE AU02Z	
C110	1-130-491-00	CERAMIC 0.047MF 50V					
C111	1-124-122-11	ELECT 100MF 50V		D205	9-904-797-01	DIODE RK44	
C112	1-126-967-11	ELECT 47MF 50V		D206	9-904-797-01	DIODE RK44	
C113	9-900-525-01	CERAMIC 0.047MF 400V		D207	8-719-501-34	DIODE S3VC40R	
C114	9-907-098-01	CERAMIC 220PF 1KV		D208	8-719-160-68	DIODE RD18F	
C115	1-128-578-91	ELECT 1MF 100V		D209	8-719-982-04	DIODE ERB81-004	
C116	1-130-495-00	FILM 0.1MF 50V		D210	9-904-799-01	DIODE MA2120	
C118	9-907-095-01	CERAMIC 2200PF 250V				<FUSE>	
C119	9-907-095-01	CERAMIC 2200PF 250V		F101	9-907-103-01	FUSE 4A 250V	
C120	9-907-096-01	CERAMIC 4700PF 250V		F102	9-907-103-01	FUSE 4A 250V	
C121	9-907-097-01	ELECT 470MF 200V				<IC>	
C122	1-130-491-00	CERAMIC 0.047MF 50V		IC101	9-904-782-01	IC STR-S6525	
C123	1-136-189-00	CERAMIC 0.1MF 250V		IC102	8-759-977-63	IC MA2830	
C124	1-136-189-00	CERAMIC 0.1MF 250V		IC103	8-749-923-66	IC STR83145	
C125	9-907-099-01	ELECT 4.7MF 400V		IC201	8-759-420-19	IC AN1431T	
C126	1-124-903-11	ELECT 1MF 50V		IC202	8-759-135-80	IC UPC358C	
C201	9-907-113-01	CERAMIC 1000PF 1KV					
C202	9-907-114-01	ELECT 1000MF 35V		IC203	8-759-420-19	IC AN1431T	
C203	1-124-906-11	ELECT 4.7MF 50V		IC204	8-759-420-19	IC AN1431T	
C204	9-907-114-01	ELECT 1000MF 35V		IC205	8-749-920-43	IC SI-3050CA	
C205	1-126-965-51	ELECT 22MF 50V		IC206	8-749-921-21	IC SI-3120C	
C207	1-130-483-00	FILM 0.01MF 50V		IC207	8-749-920-43	IC SI-3050CA	
C208	9-907-113-01	CERAMIC 1000PF 1KV		IC208	8-749-920-43	IC SI-3050CA	
C209	1-126-927-11	ELECT 2200MF 10V				<COIL>	
C210	1-126-927-11	ELECT 2200MF 10V		L101	9-907-102-01	FILTER	
C211	1-124-903-11	ELECT 1MF 50V		L102	9-907-102-01	FILTER	
C212	1-126-926-11	ELECT 1000MF 10V		L103	9-904-796-01	BEADS CORE	
C213	1-126-933-11	ELECT 100MF 10V		L104	9-904-796-01	BEADS CORE	
C214	1-126-933-11	ELECT 100MF 10V		L201	9-902-553-01	BEADS CORE	
C215	9-907-113-01	CERAMIC 1000PF 1KV					
C216	1-124-557-11	ELECT 1000MF 25V		L202	9-902-553-01	BEADS CORE	
C217	1-216-933-11	ELECT 100MF 16V		L203	9-907-112-01	CHOKE COIL	
C218	1-126-926-11	ELECT 1000MF 10V		L204	9-902-553-01	BEADS CORE	
C219	1-126-933-11	ELECT 100MF 10V		L205	9-907-112-01	CHOKE COIL	
C220	1-130-483-00	FILM 0.01MF 50V		L206	9-902-553-01	BEADS CORE	
C222	1-124-122-11	ELECT 100MF 50V				<PHOTO COUPLER>	
		<CONNECTOR>		PC101	8-749-923-50	PHOTO COUPLER PC111YC	
CN1	9-907-104-01	CONNECTOR 4P		PC102	8-749-923-50	PHOTO COUPLER PC111YC	
CN2	9-907-105-01	CONNECTOR 2P		PC201	8-719-161-00	PHOTO COUPLER PS2501	
CN3	9-907-105-01	CONNECTOR 2P				<TRANSISTOR>	
CN901	1-560-892-00	CONNECTOR 4P		Q101	9-904-781-01	TRANSISTOR 2SC2061	
CN902	1-560-894-00	CONNECTOR 6P		Q201	8-729-900-80	TRANSISTOR DTC114ES	
CN903	1-568-792-11	CONNECTOR 15P		Q202	8-729-900-80	TRANSISTOR DTC114ES	
CN904	1-506-468-11	CONNECTOR 3P		Q203	8-729-900-80	TRANSISTOR DTC114ES	
CN905	1-506-468-11	CONNECTOR 3P		Q204	8-729-900-80	TRANSISTOR DTC114ES	
CN906	1-564-013-31	CONNECTOR 3P					
CN907	1-568-779-11	CONNECTOR 2P		Q205	8-729-900-80	TRANSISTOR DTC114ES	
		<DIODE>				<RESISTOR>	
D101	8-719-500-58	DIODE D3SBA60		R101	1-202-719-00	SOLID 1M	1/2W
D102	8-719-030-25	DIODE AG01A		R102	9-904-783-01	THERMISTOR 5	25°C
D103	9-904-898-01	DIODE AU02A		R103	1-218-642-11	FILM 100K	1W
D104	9-907-090-01	DIODE RD47E		R104	1-218-642-11	FILM 100K	1W
D105	8-719-116-86	DIODE RD24JSB		R105	1-260-127-11	CARBON 220K	1/2W
D106	8-719-200-02	DIODE 10E-2					
D107	9-900-514-01	DIODE MA165		R106	1-260-127-11	CARBON 220K	1/2W
D108	9-902-050-01	DIODE ERA15-16		R107	1-215-925-11	FILM 22K	3W
D109	9-900-514-01	DIODE MA165		R108	1-215-925-11	FILM 22K	3W
D110	9-902-050-01	DIODE ERA15-16		R109	1-215-882-00	FILM 22	2W
D111	9-902-050-01	DIODE ERA15-16		R110	9-907-093-01	CEMENT 0.15	2W

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SWITCHING REGULATOR

Ref.No	Part No.	Description		Remark
R111	1-260-064-11	CARBON	1	1/2W
R112	1-260-080-11	CARBON	27	1/2W
R113	1-247-855-31	CARBON	10K	1/4W
R114	1-249-412-11	CARBON	390	1/4W
R115	1-249-437-11	CARBON	47K	1/4W
R116	1-249-411-11	CARBON	330	1/4W
R117	1-249-423-11	CARBON	3.3K	1/4W
R118	1-247-883-00	CARBON	150K	1/4W
R119	1-247-883-00	CARBON	150K	1/4W
R120	1-249-441-11	CARBON	100K	1/4W
R122	1-215-928-11	FILM	68K	3W
R123	1-215-863-11	CARBON	100K	1/4W
R124	1-215-863-11	CARBON	100K	1/4W
R125	1-260-091-11	CARBON	220	1/2W
R126	9-904-783-01	THERMISTOR	5	25°C
R127	1-260-127-11	CARBON	220K	1/2W
R128	1-260-127-11	CARBON	220K	1/2W
R129	1-249-389-11	CARBON	4.7	1/4W
R130	1-247-883-00	CARBON	150K	1/4W
R131	1-249-408-11	CARBON	180	1/4W
R132	1-249-441-11	CARBON	100K	1/4W
R201	1-215-916-00	FILM	680	3W
R202	1-215-916-00	FILM	680	3W
R203	1-260-099-11	CARBON	1K	1/2W
R204	1-247-855-31	CARBON	10K	1/4W
R205	1-247-855-31	CARBON	10K	1/4W
R206	1-249-420-11	CARBON	1.8K	1/4W
R207	1-244-417-11	CARBON	1K	1/4W
R208	1-249-423-11	CARBON	3.3K	1/4W
R209	1-249-415-11	CARBON	680	1/2W
R210	9-902-556-01	METAL	1	1/4W
R211	1-247-855-31	CARBON	10K	1/4W
R212	9-904-801-01	FILM	8.25K	1/4W
R213	1-247-855-31	CARBON	10K	1/4W
R214	1-247-855-31	CARBON	10K	1/4W
R215	1-247-855-31	CARBON	10K	1/4W
R216	1-247-855-31	CARBON	10K	1/4W
R217	1-249-425-11	CARBON	4.7K	1/4W
R218	1-247-855-31	CARBON	10K	1/4W
R219	1-247-855-31	CARBON	10K	1/4W
R220	1-214-736-00	FILM	2K	1/4W
R221	1-214-753-00	FILM	10K	1/4W
R222	1-260-083-11	CARBON	47K	1/2W
R223	1-244-417-11	CARBON	1K	1/4W
R224	1-249-419-11	CARBON	1.5K	1/4W
R225	1-247-855-31	CARBON	10K	1/4W
R226	(9-907-107-01	METAL OXIDE	430	1/4W
	9-907-094-01	METAL OXIDE	1.2K	1/4W
R227	9-907-108-01	CARBON	0.22	1/4W
R228	9-907-108-01	CARBON	0.22	1/4W
R229	(9-907-109-01	METAL OXIDE	1.3K	1/4W
	9-907-107-01	METAL OXIDE	430	1/4W
R230	1-249-416-11	CARBON	820	1/4W
R231	1-249-414-11	CARBON	560	1/4W
		<RELAY>		
RL201	9-907-115-01	RELAY		
		<TRANSFORMER>		
T101	9-907-100-01	SWITCHING		
T102	9-907-101-01	SWITCHING		

Ref.No	Part No.	Description	Remark
		<VARIABLE RESISTOR>	
VR201	9-907-110-01	RES, VER, CARBON	2K
VR202	9-907-111-01	RES, VER, CARBON	500
VR203	1-238-570-11	RES, VER, CARBON	2K
VR204	1-238-570-11	RES, VER, CARBON	2K

		MISCELLANEOUS	

Δ 1-413-942-21		SWITCHING REGULATOR (UP-1200A)	
Δ 1-413-946-21		SWITCHING REGULATOR (UP-1200AEPM)	
1-507-195-21		SPECIAL REMOTE CONTROL JACK	
1-541-684-42		MOTOR, DC	
1-543-987-11		HEAD, THERMAL	
Δ 1-554-880-11		SWITCH, PUSH (AC POWER) (1 KEY)	
Δ 1-580-375-11		INLET 3P	
1-692-855-21		KEYBOARD, FFC WITH	
1-698-019-31		MOTOR, DC (FAN)	
1-751-235-11		CABLE, FLAT (FVM-2)	
1-751-238-11		CABLE, FLAT (FHH-1)	
1-751-239-11		CABLE, FLAT (FHH-2)	
1-765-051-12		WIRE, FLAT TYPE (7 CORE)	
1-765-052-12		WIRE, FLAT TYPE (16 CORE)	
*1-952-970-11		HARNESS, SUB (HMSW42)	
*1-952-971-11		HARNESS, SUB (HMDS)	
*1-952-972-11		HARNESS, SUB (HMPW)	
*1-952-973-11		HARNESS, SUB (SPW)	
*1-952-974-11		HARNESS, SUB (DSSW39)	
*1-952-975-11		HARNESS, SUB (HMSW41)	
*1-952-976-11		HARNESS, SUB (DSSU10)	
*1-952-977-12		HARNESS, SUB (REMOTE)	
*1-952-978-11		HARNESS, SUB (KYPTC)	
1-952-980-11		HARNESS, SUB (AC (IN))	
1-952-981-11		HARNESS, SUB (AC (SW))	
*1-952-982-11		HARNESS (VIF012)	
*1-952-983-11		HARNESS (DC (VFMDS))	
*1-952-986-12		HARNESS (FMKY)	

		ACCESSORY & PACKING MATERIALS	

A-8310-002-D		TRAY ASSY, PAPER	
1-465-508-21		COMMANDER, REMOTE (RM-5100)	
Δ 1-534-827-14		CORD, POWER (UP-1200A)	
Δ 1-551-631-41		CORD, POWER (UP-1200AEPM)	
1-557-637-11		CABLE, COMMANDER	
*3-183-227-02		TRAY	
*3-183-929-02		CUSHION (UPPPER)	
*3-183-930-02		CUSHION (LOWER)	
3-185-788-01		PLATE ORNAMENTAL	
*3-188-192-01		INDIVIDUL CARTON (UP-1200A)	
*3-188-193-01		INDIVIDUL CARTON (UP-1200AEPM)	
*3-694-922-01		SHEET, PROTECTION	
3-758-132-25		MANUAL, INSTRUCTION (UP-1200A)	
3-758-132-14		MANUAL, INSTRUCTION (UP-1200AEPM)	
3-758-769-12		CARD QUICK REFERENCE (UP-1200AEPM)	

<u>Ref.No</u>	<u>Part No.</u>	<u>Description</u>	<u>Remark</u>	<u>Ref.No</u>	<u>Part No.</u>	<u>Description</u>	<u>Remark</u>
		HARDWARE LIST					

	7-621-255-15	SCREW +P 2X3					
	7-621-259-35	SCREW +P 2.6X5					
	7-621-284-40	SCREW +P 2.6X10					
	7-621-759-75	+PSW, 2.6X10					
	7-682-166-01	SCREW +P 4X20					
	7-682-645-01	SCREW +PS 3X4					
	7-682-647-09	SCREW +PS 3X6					
	7-685-103-19	SCREW +P 2X5 TYPE2 NON-SLIT					
	7-685-134-19	SCREW +P 2.6X8 TYPE2 NON-SLIT					
	7-685-534-19	SCREW +BTP 2.6X8 TYPE2 N-S					
	7-685-645-79	SCREW +BVTP 3X6 TYPE2 IT-3					
	7-685-852-01	SCREW +BVTT 2X5 (S)					
	7-685-862-01	SCREW +BVTT 2.6X6 (S)					

SECTION 7 ELECTRICAL ADJUSTMENT

7-1. PREPARATION BEFORE ADJUSTMENT (UP-1200A)

The measurement equipment below is used for adjustment.

7-1-1. Equipment Required

- 1) Monitor television
- 2) Dual-trace oscilloscope with band of more than 30 MHz and delay mode
(Use a 10:1 probe unless otherwise specified.)
- 3) Frequency counter
- 4) Signal generator video output terminals (SGA-300 and SGA-130)
- 5) Digital voltmeter
- 6) Video print paper
- 7) Video print cartridge

7-1-2. Connection of the Equipment

As shown in Fig. 7-1, each measurement equipment is connected according to instructions from the input terminal (S video or video) to perform the adjustment. Each input terminal is specified in a signal column by parentheses. If not specified, either input terminal can be used.

Note: For the adjustment specified as an S video input terminal, the product specifications of this unit may not be satisfied when the adjustment is performed by a video input terminal. Be sure to perform the adjustment according to instructions. When the adjustment is performed using the VTR with an S video output terminal as a signal source, the performance of this unit varies depending on the VTR. Use the pattern generator with a Y/C separation output terminal as far as possible.

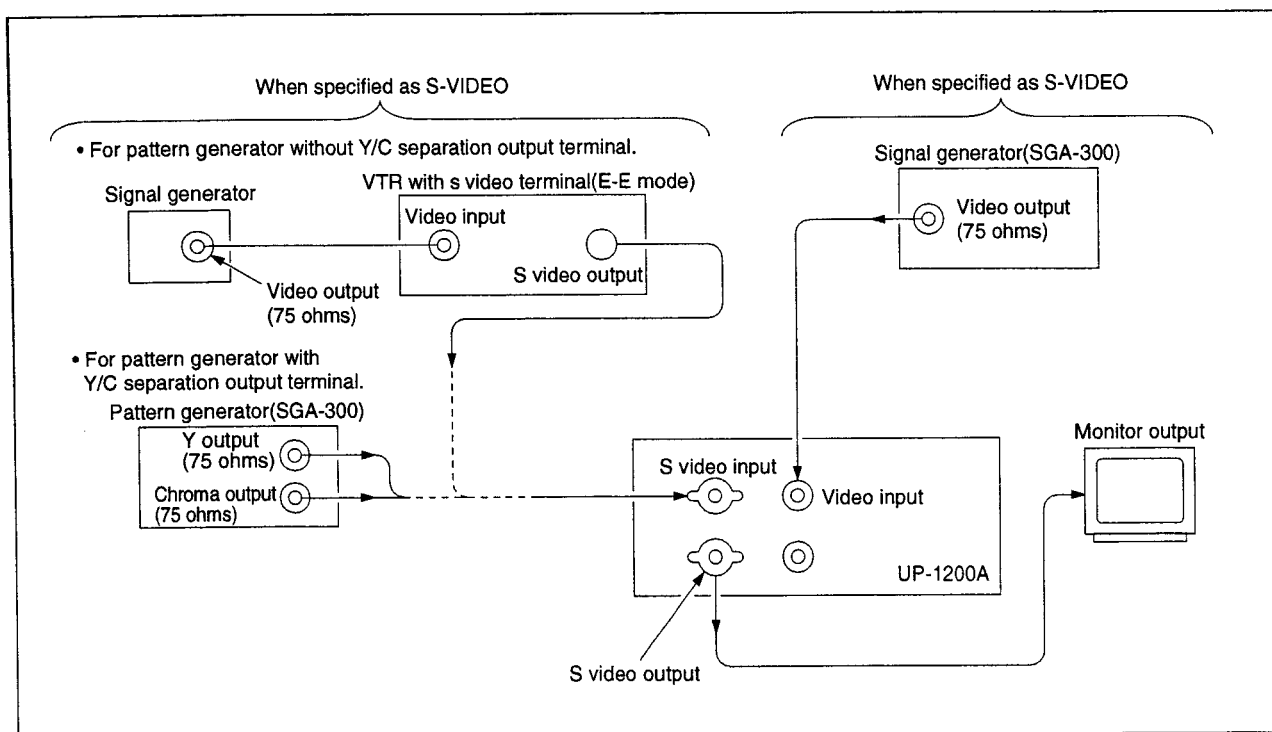


Fig. 7-1.

7-1-3. Confirmation of the Input Signal

The video signal generated from a pattern generator is used for video circuit adjustment as an adjustment signal. Therefore, it is necessary that this video output signal satisfies the required specification.

1. During S video (S VIDEO) input

Connect an oscilloscope to the Y signal terminal of the S video input terminal, and confirm that the sync signal of a Y signal is 286 mV, the amplitude of the video portion is 714 mV, and the setup level is 0 mV. (When the VTR with an S video output terminal is used, confirm that no chroma signal and burst signal remain.) Moreover, connect an oscilloscope to the chroma signal terminal of the S video input terminal, and confirm that the burst signal amplitude of a chroma signal is flat (286 mV) and that the amplitude ratio of a burst signal to a chroma signal is 0.30 : 0.66. The Y signal and chroma signal used for the adjustment are shown in Fig. 7-2.

The setup level is the potential difference between the black and pedestal levels.

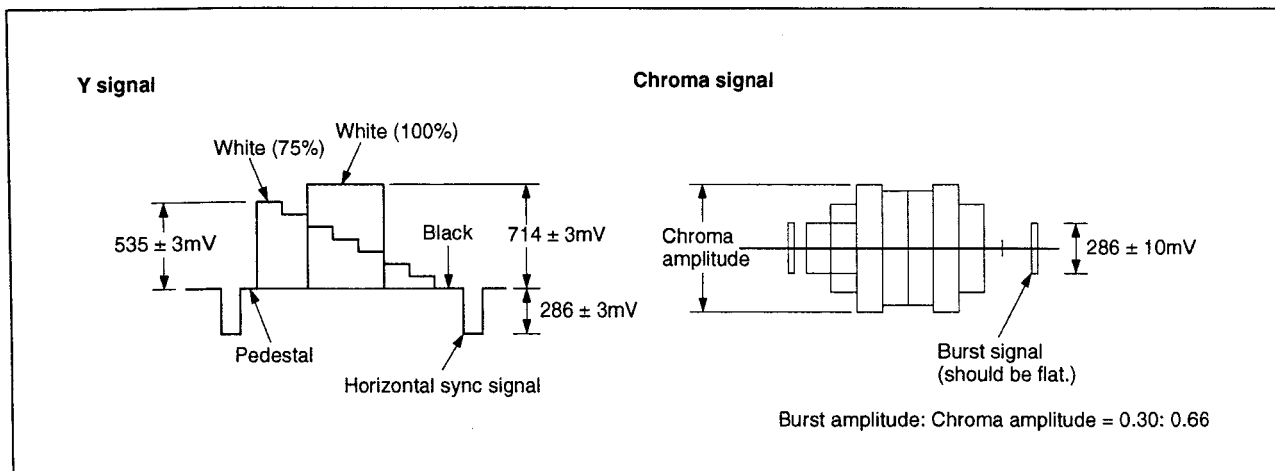


Fig. 7-2. Color-Bar Signal in Pattern Generator (during 75-ohm Termination)

2. During video (VIDEO) input

Connect an oscilloscope to the video input terminal, and confirm that the sync signal amplitude of a video signal is 286 mV, the amplitude of the video portion is 714 mV, the setup level is 0 mV, the amplitude of a burst signal is flat (286 mV), and the level ratio of a burst signal to a "red" signal is 0.30 : 0.66.

The video signal (color-bar) used for the adjustment is shown in Fig. 7-3.

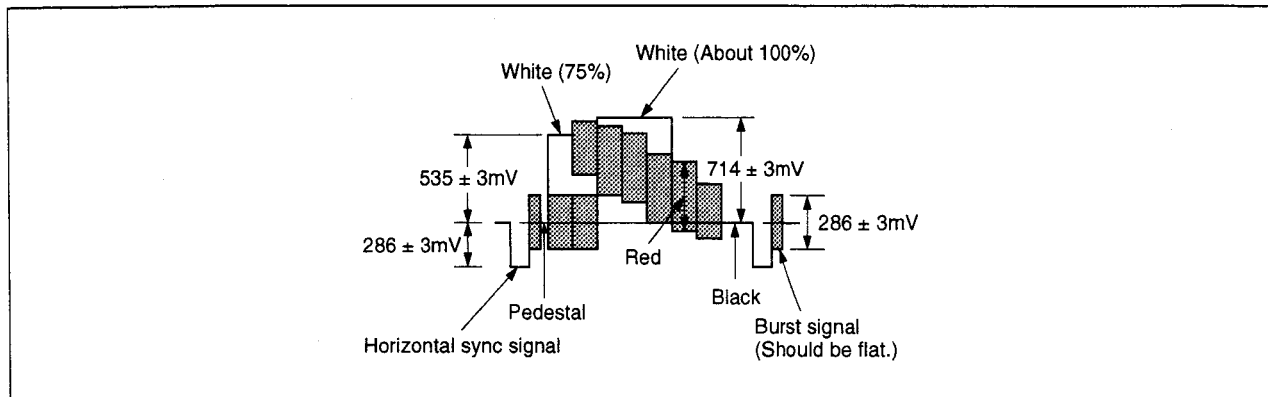


Fig. 7-3. Color-Bar Signal in Pattern Generator (during 75-ohm Termination)

7-1-4. How to Operate Adjustment Remote Controller RM-95 (J-6082-053-A)

For the connection of adjustment remote controller RM-95, insert the RM-95 terminal into J101 LANC jack on the VA-76 board in the UP-1200 series.

Before performing each adjustment, reset the corresponding protector as shown in the table below.

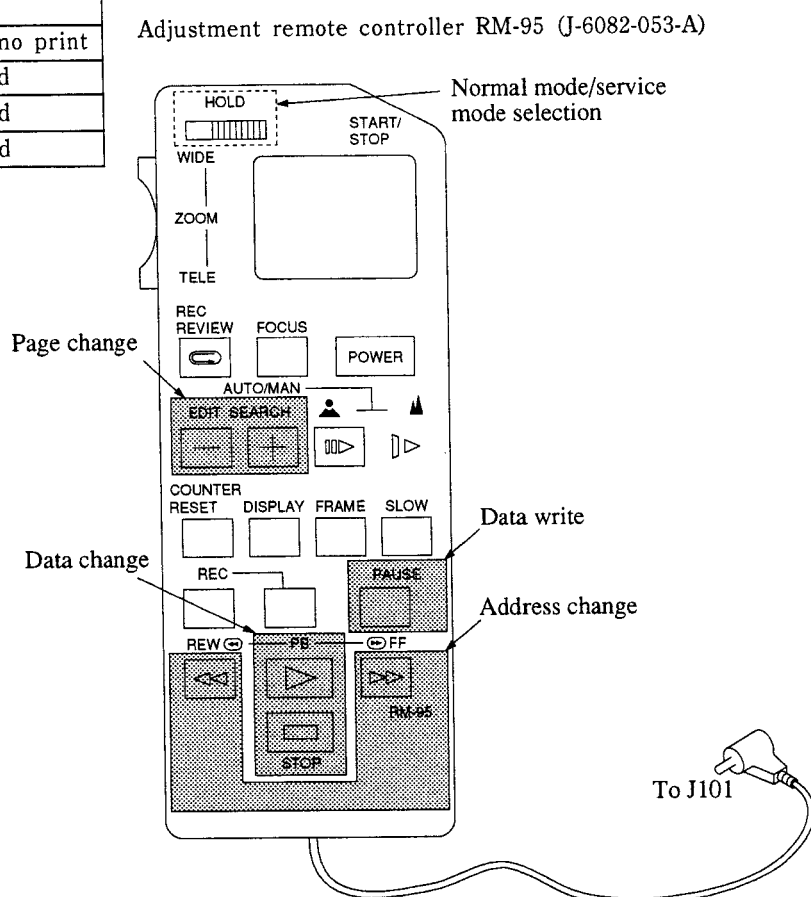
Page	6	Data	80	Address	00
------	---	------	----	---------	----

However, any reset is not required during continuous adjustment. Press the PAUSE button for every adjustment item and write each data.

1. Menu setting

The menu is set in the initial state (refer to the table below).

Number of prints	1
Memo	No memo print
Memory setting	Standard
Print setting	Standard
Picture quality setting	Standard



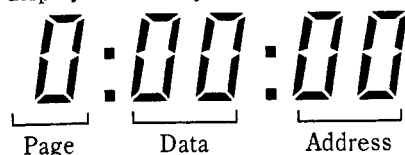
7-1-5. Service Mode

1. Setting the service mode

The service mode is classified into an adjustment mode that adjusts the EVR and a test mode that displays the state of the unit.

The test mode and adjustment mode are entered if the adjustment remote controller (with the HOLD switch set to HOLD) is connected.

LCD display of the adjustment remote controller



2. Video circuit adjustment

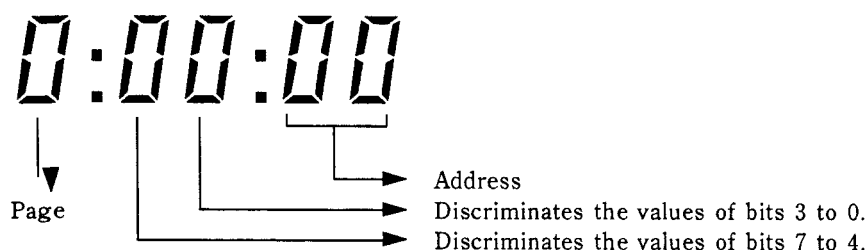
When F page data was erased during EE-PROM (IC309 on the VA-76 board) replacement, enter the initial value of the F page and adjust the video circuit.

For details of the initial value, refer to the "F Page Address Book" in "Service Man Mode".

3. Discrimination of the bit value

In subsequent items, it is necessary to discriminate the bit value by the display data of an adjustment remote controller. On whether the bit value is "1" or "0", discriminate according to the data shown in the table below.

Adjustment remote controller display



Remote controller display	Bit value			
	Bit 3 or 7	Bit 2 or 6	Bit 1 or 5	Bit 0 or 4
0	0	0	0	0
1	0	0	0	1
2	0	0	1	0
3	0	0	1	1
4	0	1	0	0
5	0	1	0	1
6	0	1	1	0
7	0	1	1	1
Ⓐ → 8	1	0	0	0
9	1	0	0	1
A(H)	1	0	1	0
B(I)	1	0	1	1
C(E)	1	1	0	0
D(∂)	1	1	0	1
Ⓑ → E(E)	1	1	1	0
F(F)	1	1	1	1

(Example) When the display data of the remote controller is "8E", the values of bits 7 to 4 can be discriminated by column Ⓐ, and the values of bits 3 to can be discriminated by column Ⓑ.

Command name	Function	Command button
Page Up	Increments the page by one.	Edit Search (+)
Page Down	Decrements the page by one.	Edit Search (-)
Address Up	Increments the address by one.	Fast Forward (FF)
Address Down	Decrements the address by one.	Rewind (REW)
Data Up	Increments the data by one.	Play Back (PB)
Data Down	Decrements the data by one.	Stop (STOP)
Store	Writes data in an EE-PROM RAM.	Pause (PAUSE)

4. Entering the test signal (Transmission to memory control)

LCD display of the adjustment remote controller

The LCD display shows the time 0:00:00. Below the digits, there are three brackets: the first bracket under the first '0' is labeled 'Page', the second bracket under the '00' is labeled 'Data', and the third bracket under the final '00' is labeled 'Address'.

- 1) Insert the RM-95 into the control terminal (J-1 on the VA-14 board).
 - 2) Set the HOLD switch of the RM-95 to the service mode. (Usually set to the service mode.)
 - 3) Turn on the power of the UP-1800/1850 and set each signal as shown below.
- ※ The input signal is a non-signal.

[Color-bar signal]

Page	7	Data	2b	Address	20
------	---	------	----	---------	----

[Stairstep signal(H)]

Page	7	Data	27	Address	20
------	---	------	----	---------	----

[Stairstep signal(V)]

Page	7	Data	28	Address	20
------	---	------	----	---------	----

[Ramp signal(H)]

Page	7	Data	29	Address	20
Page	7	Data	2C	Address	20

[Ramp signal(V)]

Page	7	Data	2A	Address	20
------	---	------	----	---------	----

5. Infrared remote controller check

Page	7	Data		Address	07
------	---	------	--	---------	----

※ The reception-time state of an infrared remote controller can be confirmed by the number of display data items.

Data	Reception-time state	Data	Reception-time state
01	Power supply	42	MENU
10	SOURCE/MEMORY	43	EXEC
11	Memory IN	14	STOP
13	Print	1C	MEMORY PAGE
30	UP	5D	Print quantity +
31	DOWN	5E	Print quantity -
32	LEFT	3C	Color adjustment
33	RIGHT	4B	MULTI PICTURE

6. Key input check

Page	7	Data		Address	11
------	---	------	--	---------	----

Data	Key input	Data	Key input
09	SOURCE/MEMORY	14	RIGHT
0A	MEMORY IN	11	MENU
0B	PRINT	12	EXEC
15	UP	01	STOP
16	DOWN	0C	MEMORY/PAGE
13	LEFT		

※ The status of each key can be confirmed in real time.

7. Key input check (edge)

Page	7	Data		Address	12
------	---	------	--	---------	----

※ Write the data below and press the PAUSE button. The state obtained when the key was pressed is then entered.

Data	Key input	Data	Key input
10	SOURCE/MEMORY	33	RIGHT
11	MEMORY IN	42	MENU
13	PRINT	43	EXEC
30	UP	14	STOP
31	DOWN	1C	MEMORY/PAGE
32	LEFT		

8. LED control check

Page	7	Data		Address	14
------	---	------	--	---------	----

※ The LED is made turned on forcibly.

Data	Operation
00	Normal
01	Only the error LED () lights.
02	Only the print LED () lights.

9. Buzzer sound check

Page	7	Data		Address	16
------	---	------	--	---------	----

※ Write any data and press the PAUSE button. The "buzzer" then sounds.

10. Sharpness adjustment

Page	7	Data		Address	40
------	---	------	--	---------	----

Data	Level position
F9	MIN
00	CENTER
07	MAX

※ Write the above data and press the PAUSE button. The sharpness data is then changed.

11. Picture quality set check

Page	7	Data		Address	
------	---	------	--	---------	--

Address		
45	B	Offset level
46	G	
47	R	
48	B	GAIN
49	G	
4A	R	

Offset data	Level position	Gain data
08	MIN	3F
00	CENTER	80
38	MAX	E3

12. [Mode control: ROM Ver]

Page	7	Data		Address	01
------	---	------	--	---------	----

※ Indicates the ROM version during mode control.

13. THRU/EE check

Page	7	Data		Address	72
------	---	------	--	---------	----

Data	
01	EE
02	THRU

14. Test pattern memory write check

Page	7	Data		Address	20
------	---	------	--	---------	----

Data	Text pattern
27	Stairstep (H)
28	Stairstep (V)
29	Ramp (H)
2A	Ramp (V)
2B	Color-bar (false)

15. Input signal selection check

Page	7	Data		Address	71
------	---	------	--	---------	----

Data	Input signal
01	VIDEO
02	S VIDEO

16. Motor single-drive check

(1) Head motor

Page	8	Data		Address	1A
------	---	------	--	---------	----

Data	
00	Stop
01*1	Head position UP
02*2	Head position DOWN
08	Home position

※1 The head position changes by one step every time the PAUSE button of the RM-95 is pressed.

※2 Do not perform the DOWN operation in head position-1. This may destroy the unit. If so, turn off the AC power immediately.

(2) Ribbon motor (Roller motor)

Page	8	Data		Address	1A
------	---	------	--	---------	----

Data	
00	Stop
03*1	Roller position UP
04*2	Ribbon winding (continuous)

※1 The roller position changes by one step every time the PAUSE button of the RM-95 is pressed.

※2 Data 04 is continuously driven when the PAUSE button is pressed.

(3) Stepping motor, fan motor, delivery arm position

Page	8	Data		Address	1A
------	---	------	--	---------	----

Data	
00	Stop
05	Stepping motor rotation (continuous)
06	Stepping motor reverse-rotation (continuous)
09	Fan motor rotation
0B	Delivery arm position UP*

※ The delivery arm position changes by one step every time the PAUSE button is pressed.

17. Roller position data

Page	8	Data		Address	04
------	---	------	--	---------	----

Data	Position
E0	NULL
00	P0 position
02	P1 position
04	P2 position

18. Paper delivery arm position data

Page	8	Data		Address	05
------	---	------	--	---------	----

Data	Position
0E	NULL
00	Home position
01	Print position

19. Mechanical control ROM version check

Page	8	Data		Address	01
------	---	------	--	---------	----

※ Indicates the ROM version during mechanical control.

20. F page address book

Adjustment address	Name	Function () is the adjustment voltage output terminal.
00		
01		
02		
03		
04		
05		
06		
07		
08		
09		
0A		
0B		
0C		
0D		
0E		
0F		
10		
11	HUECONT	Decoder hue adjustment [Q329-E]
12	CCONT	Decoder color adjustments 1 and 2 [Q329-E]
13	SHPCT	Decoder sharpness adjustment [IC311 ⑨]
14	G-GAIN	Green gain adjustment
15	R-GAIN	Red gain adjustment
16	B-GAIN	Blue gain adjustment
17	WH-REF	White REF level adjustment [R340, 341]
18	BLACK-REF	ABL adjustment 2 [Q323-E]
19	AGCC-OST	Chroma Y AGC Offset
1A	D/A	D/A REF adjustment [FL105 or CN501 ①]
1B	AGC OST	AGC level adjustment [CN101 ⑳]
1C		
1D		
1E		
1F		
20	ERG	Encoder white balance adjustment [FL105, CN502 ①]
21	DM-LEV	
22	COLOR	INT/EXT detection level adjustment [IC106 ⑦]
23	CHROMA LEV	Encoder chroma level adjustment [CN502 ①]
24	BURST LEV	Encoder burst level adjustment [FL105 or CN501 ①]
25	W-POSIT	AFC phase adjustment
26		
27	CHAR	OSD level adjustment [FL105, CN502 ①]
28	ABL OST	ABL adjustment 1 [IC302 ①, ②]
29	TPADJ	Timing pulse adjustment
2A	EBG	Encoder white balance adjustment [FL105 or CN501 ①]
2B	HUE	Encoder hue adjustment
2C		
2D		
2E		
2F		

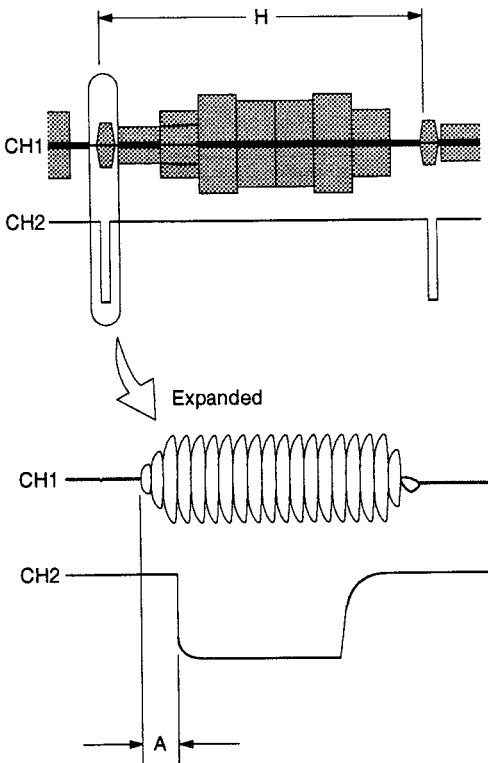
UP-1200A

7-2. VIDEO CIRCUIT ADJUSTMENT (VA-76 BOARD)

7-2-1. INT/EXT Detection Level Adjustment

Conditions for adjustment	Spec.	Adjustment	
<ul style="list-style-type: none"> Input signal: Color-bar (VIDEO) Measurement equipment: Digital voltmeter 	Measurement point: Pin ⑦ of IC106 or positive ("+") side of C103 $2.0 \pm 0.05 \text{ V DC}$	Adjustment page	F
		Adjustment address	22

7-2-2. BGP Phase Adjustment

Conditions for adjustment	Spec.	Adjustment
<ul style="list-style-type: none"> Input signal: Color-bar (S VIDEO) Measurement equipment: Oscilloscope 	Measurement point: Pin ③② of C376 or IC311 (CH1) Pin ①⑤ of IC311 (CH2)  $A = 0.77 \pm 0.07 \mu \text{ sec}$	● RV304

7-2-3. APC Free-Running Frequency Adjustment

Conditions for adjustment	Spec.	Adjustment
<ul style="list-style-type: none"> Input signal: Non-signal (with the input cable removed) Measurement equipment: Frequency counter 	Measurement point: Emitter of Q334 or R472 Shortcircuit C358 to ground and C376 to ground. $f = 3.579545 \text{ MHz} \pm 20\text{Hz}$	⚙ RV301

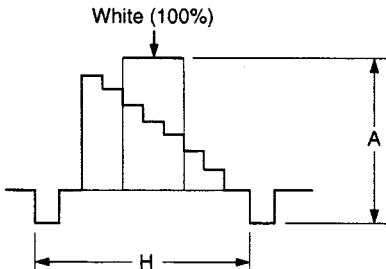
7-2-4. INT Sync Generator Frequency Adjustment

Conditions for adjustment	Spec.	Adjustment
<ul style="list-style-type: none"> Input signal: Non-signal (with all the input cables removed) Measurement equipment: Frequency counter 	Measurement point: Pin ② of IC130 or pin ① of IC128 $f = 3.579545 \text{ MHz} \pm 20 \text{ Hz}$	⚙ CT102

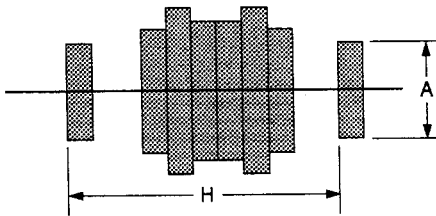
7-2-5. AFC Error Voltage Adjustment

Conditions for adjustment	Spec.	Adjustment
<ul style="list-style-type: none"> Input signal: Non-signal (with all the input cables removed) Measurement equipment: Digital voltmeter 	Measurement point: CC101 or R110 $-0.5 \pm 0.2 \text{ V DC}$	⚙ CT101

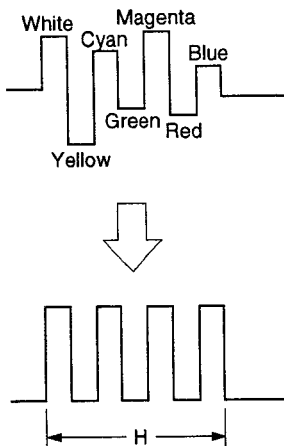
7-2-6. Y/C Separation Y-Level Adjustment

Conditions for adjustment	Spec.	Adjustment
<ul style="list-style-type: none"> Input signal: Color-bar (VIDEO) Measurement equipment: Oscilloscope 	Measurement point: Emitter of Q116 or R218  $A = 1.00 \pm 0.03 \text{ V p-p}$	⚙ RV302

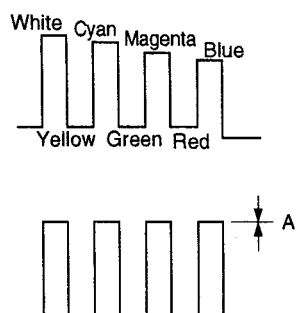
7-2-7. Y/C Separation Chroma-Level Adjustment

Conditions for adjustment	Spec.	Adjustment
<ul style="list-style-type: none"> Input signal: Color-bar (VIDEO) Measurement equipment: Oscilloscope 	<p>Measurement point: Emitter of Q121 or R229</p>  <p>$A = 286 \pm 30 \text{ mV p-p}$</p>	<p>RV303</p>

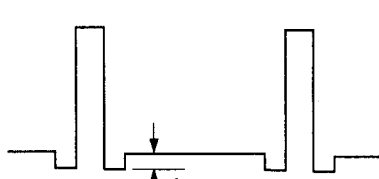
7-2-8. Decoder Hue Adjustment

Conditions for adjustment	Spec.	Adjustment	
<ul style="list-style-type: none"> Input signal: Color-bar 75% (S VIDEO) Measurement equipment: Oscilloscope 	<p>Measurement point: Emitter of Q329</p>  <p>The peak-value colors (white, cyan, magenta, and blue), and the bottom-value colors (yellow, green, and red) should flat and linear.</p>	Adjustment page	F
		Adjustment address	11

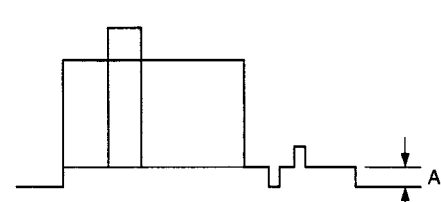
7-2-9. Decoder Color (1) Adjustment

Conditions for adjustment	Spec.	Adjustment	
<ul style="list-style-type: none"> Input signal: Color-bar 75% (S VIDEO) Measurement equipment: Oscilloscope 	<p>Measurement point: Emitter of Q329</p>  <p>$A = 0 \pm 50 \text{ mV}$ (Adjust so that the difference in level of each color is zero ("0").)</p> <p>If the difference in level exists in each color, readjust the hue.</p>	Adjustment page	F
		Adjustment address	12

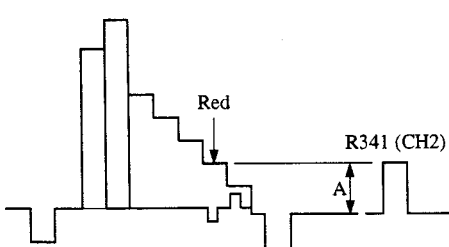
7-2-10. ABL Adjustment (1)

Conditions for adjustment	Spec.	Adjustment	
<ul style="list-style-type: none"> Input signal: Black burst (S VIDEO) Measurement equipment: Oscilloscope 	<p>Measurement point: Emitter of Q302</p>  <p>$A = 20 \pm 20 \text{ mV}$</p>	Adjustment page	F
		Adjustment address	28
		DATA 80	

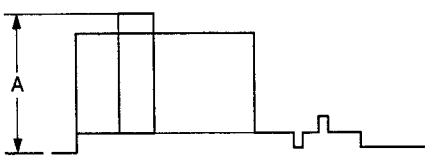
7-2-11. ABL Adjustment (2)

Conditions for adjustment	Spec.	Adjustment	
<ul style="list-style-type: none"> Input signal: Color-bar (S VIDEO) Measurement equipment: Oscilloscope 	<p>Measurement point: Emitter of Q323</p>  <p>$A = 20 \pm 20 \text{ mV}$</p>	Adjustment page	F
		Adjustment address	18
		DATA 80	

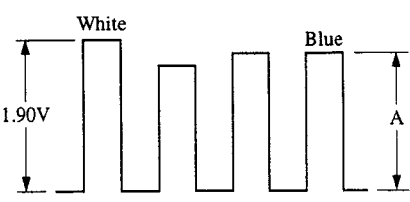
7-2-12. White REF Level Adjustment

Conditions for adjustment	Spec.	Adjustment	
<ul style="list-style-type: none"> Input signal: Color-bar (only Y)(S VIDEO) Measurement equipment: Oscilloscope 	<p>Measurement point: R348 (CL304) (red) (CH1) R341 (white) (CH2)</p>  <p>Adjust so that the red (R348 or CL304) of a Y signal component coincides with the peak level of a white REF pulse (R341). A = Within 20 mV</p>	Adjustment page	F
		Adjustment address	17

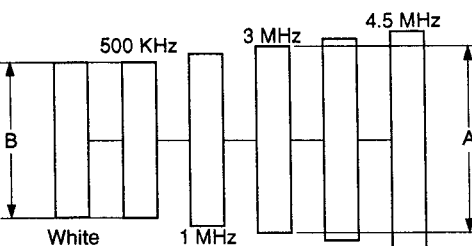
7-2-13. AGC Level Adjustment

Conditions for adjustment	Spec.	Adjustment	
<ul style="list-style-type: none"> Input signal: Color-bar (S VIDEO) Measurement equipment: Oscilloscope 	<p>Measurement point: Pin ② of CN101 (G OUT)</p>  <p>A = 1.90 ± 0.05 V p-p</p>	Adjustment page	F
		Adjustment address	1B

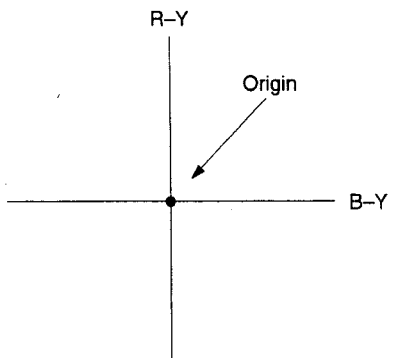
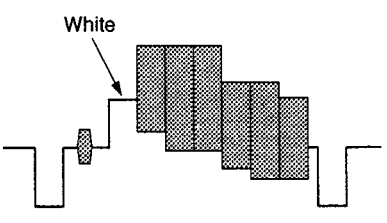
7-2-14. Decoder Color (2) Adjustment

Conditions for adjustment	Spec.	Adjustment	
<ul style="list-style-type: none"> Input signal: Color-bar (S VIDEO) Measurement equipment: Oscilloscope 	<p>Measurement point: Pin ② of CN101 (B OUT)</p>  <p>A = 1.95 ± 0.05 V p-p</p>	Adjustment page	F
		Adjustment address	12

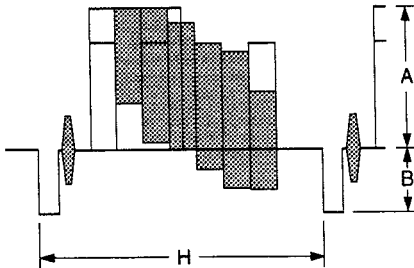
7-2-15. Decoder Sharpness Adjustment

Conditions for adjustment	Spec.	Adjustment	
<ul style="list-style-type: none"> Input signal: Multi-burst (S VIDEO) Measurement equipment: Oscilloscope 	<p>Measurement point: Pin ⑨ of IC311</p>  <p>$A/B = 1.15 \pm 0.05$ (Level ratio of 1 MHz to 4.5 MHz)</p>	Adjustment page	F
		Adjustment address	13

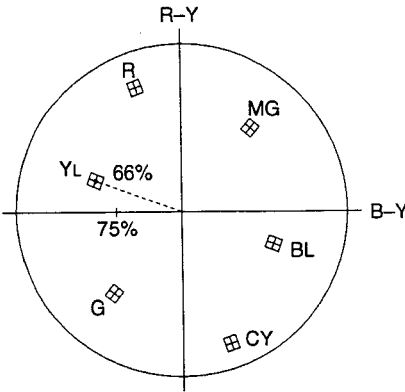
7-2-16. Encoder White Balance Adjustment

Conditions for adjustment	Spec.	Adjustment	
<ul style="list-style-type: none"> Mode: Input picture Input signal: Multi-burst (S VIDEO) Measurement equipment: Oscilloscope, Vectorscope, 75-ohm termination 	<p>Measurement point: Video output terminal</p> <ul style="list-style-type: none"> For vectorscope  <p>The white luminescent spot should coincide with the origin.</p> <ul style="list-style-type: none"> For oscilloscope  <p>Adjust so that the chroma signal component (3.58 MHz) that leaks to the white portion of an output waveform is minimum.</p>	Adjustment page	F
		Adjustment address	20(ERG) 2A(EBG)

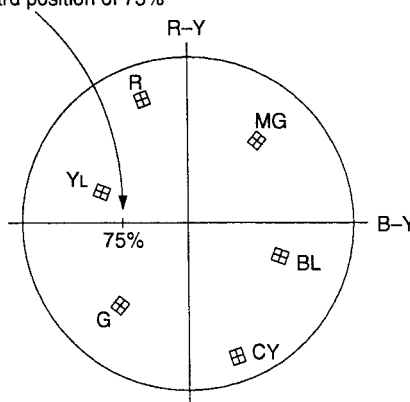
7-2-17. D/A REF Adjustment

Conditions for adjustment	Spec.	Adjustment	
		Adjustment page	F
<ul style="list-style-type: none"> Mode: Input picture Input signal: Color-bar (VIDEO) Measurement equipment: Oscilloscope 	Measurement point: Video output terminal (75-ohm termination)  $A = 659 \pm 20 \text{ mV}$ $B = 286 \pm 30 \text{ mV}$	Adjustment address	1A

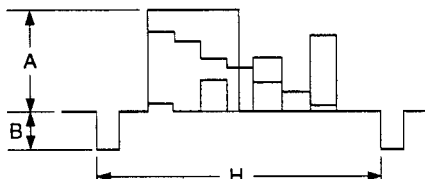
7-2-18. Encoder Chroma Level Adjustment

Conditions for adjustment	Spec.	Adjustment	
		Adjustment page	F
<ul style="list-style-type: none"> Mode: Input picture Input signal: Color-bar (VIDEO) Measurement equipment: Vectorscope Video output terminal in 75-ohm termination 	Measurement point: FL105 (VIDEO OUT) or Pin ① of CN502  · 66% of length between center of yellow "田" and cross point of R-Y and B-Y axes.	Adjustment address	23

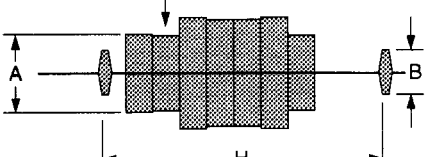
7-2-19. Encoder Color Burst Level Adjustment

Conditions for adjustment	Spec.	Adjustment	
<ul style="list-style-type: none"> Mode: Input picture Input signal: Non-signal Measurement equipment: Vectorscope 	<p>Measurement point: Video output (in 75-ohm termination)</p> <p>Burst standard position of 75%</p>  <p>Set the luminescent spot in the burst level to the 75% position within one luminescent spot.</p>	Adjustment page	F
		Adjustment address	24

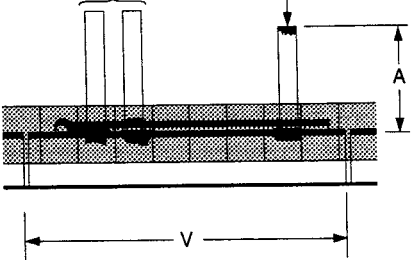
7-2-20. S Video Output Y Level Adjustment

Conditions for adjustment	Spec.	Adjustment	
<ul style="list-style-type: none"> Mode: Input picture Input signal: Digital Color-bar(※) (VIDEO) Measurement equipment: Oscilloscope S video output Y terminal in 75-ohm termination 	<p>Measurement point: Pin ② of S video output terminal or Pin ③ of CN502 (Y)</p>  <p>$A = 659 \pm 20 \text{ mV}$ $B = 286 \pm 30 \text{ mV}$</p>	Adjustment page	7
		Adjustment address	20
		Data	37
		<p>※ The digital color-bar signal is displayed when it is set as described above by RM-92.</p>	

7-2-21. S Video Output Chroma Level Adjustment

Conditions for adjustment	Spec.	Adjustment	
<ul style="list-style-type: none"> Mode: Input picture Input signal: Color-bar (VIDEO) Measurement equipment: Oscilloscope S video output C terminal in 75-ohm termination 	<p>Measurement point: Pin ④ of S video output terminal</p> <p>Yellow</p>  <p>$A = 408 \pm 30 \text{ mV (Yellow)}$ $B = 286 \pm 30 \text{ mV}$</p>	Adjustment page	7
		Adjustment address	20
		Data	37
		<p>※ The digital color-bar signal is displayed when it is set as described above by RM-92.</p>	

7-2-22. OSD Level Adjustment

Conditions for adjustment		Spec.		Adjustment	
<ul style="list-style-type: none">· Mode: Input picture· Input signal: Non-signal· Measurement equipment: Oscilloscope· Composite video output C terminal in 75-ohm termination	<p>Measurement point: Video output terminal (75-ohm termination)</p> <p>Chroma signal is added.</p> <p>White character</p>  <p>$A = 500 \pm 30 \text{ mV}$</p>		Adjustment page		F
			Adjustment address		27

UP-1200AEPM

7-1. PREPARATION BEFORE ADJUSTMENT

The measurement equipment below is used for adjustment.

7-1-1. Equipment Required

- 1) Monitor television
- 2) Dual-trace oscilloscope with band of more than 30 MHz and delay mode
(Use a 10:1 probe unless otherwise specified.)
- 3) Frequency counter
- 4) Signal generator video output terminals (TSG-131, TSG-131A, TSG-1411 or SG-408P)
- 5) Digital voltmeter
- 6) Video print paper
- 7) Video print cartridge

7-1-2. Connection of the Equipment

As shown in Fig. 7-1, each measurement equipment is connected according to instructions from the input terminal (S video or video) to perform the adjustment. Each input terminal is specified in a signal column by parentheses. If not specified, either input terminal can be used.

Note: For the adjustment specified as an S video input terminal, the product specifications of this unit may not be satisfied when the adjustment is performed by a video input terminal. Be sure to perform the adjustment according to instructions.

When the adjustment is performed using the VTR with an S video output terminal as a signal source, the performance of this unit varies depending on the VTR. Use the pattern generator with a Y/C separation output terminal as far as possible.

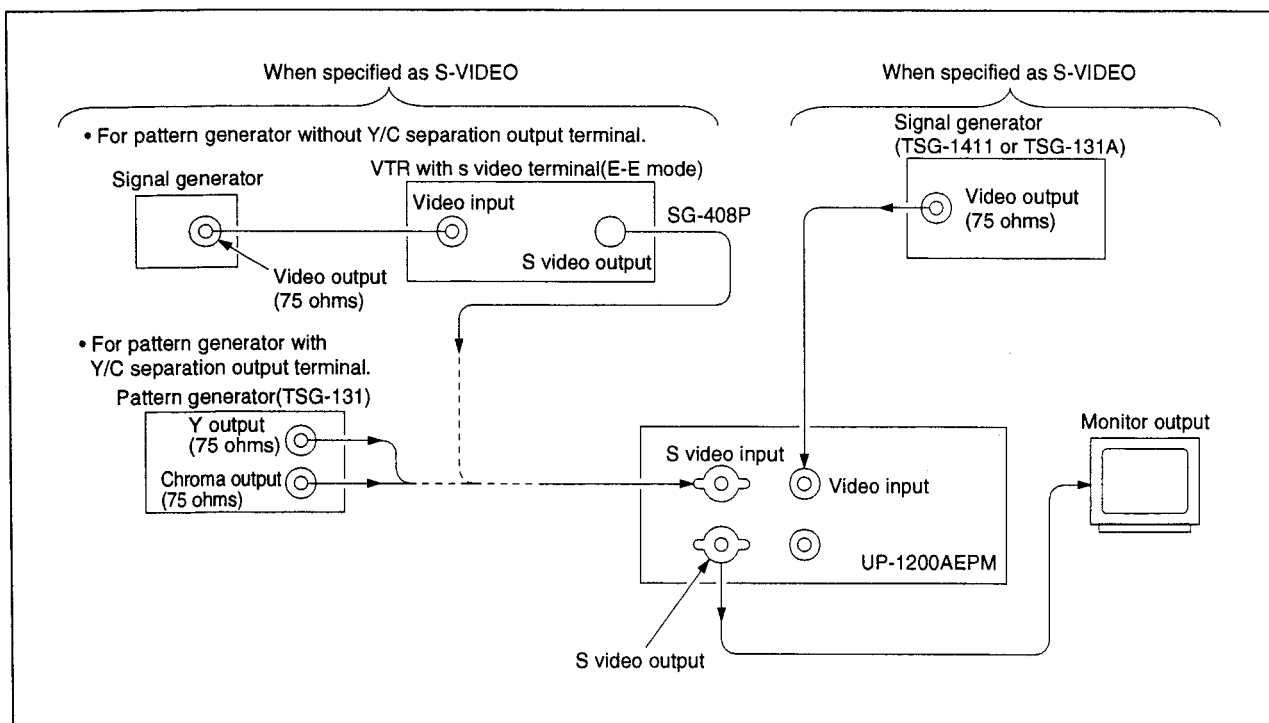


Fig. 7-1.

7-1-3. Confirmation of the Input Signal

The video signal generated from a pattern generator is used for video circuit adjustment as an adjustment signal. Therefore, it is necessary that this video output signal satisfies the required specification.

1. During S video (S VIDEO) input

Connect an oscilloscope to the Y signal terminal of the S video input terminal, and confirm that the sync signal of a Y signal is 300 mV, the amplitude of the video portion is 700 mV, and the setup level is 0 mV. (When the VTR with an S video output terminal is used, confirm that no chroma signal and burst signal remain.) Moreover, connect an oscilloscope to the chroma signal terminal of the S video input terminal, and confirm that the burst signal amplitude of a chroma signal is flat (300 mV) and that the amplitude ratio of a burst signal to a chroma signal is $0.30 : 0.66$. The Y signal and chroma signal used for the adjustment are shown in Fig. 7-2.

The setup level is the potential difference between the black and pedestal levels.

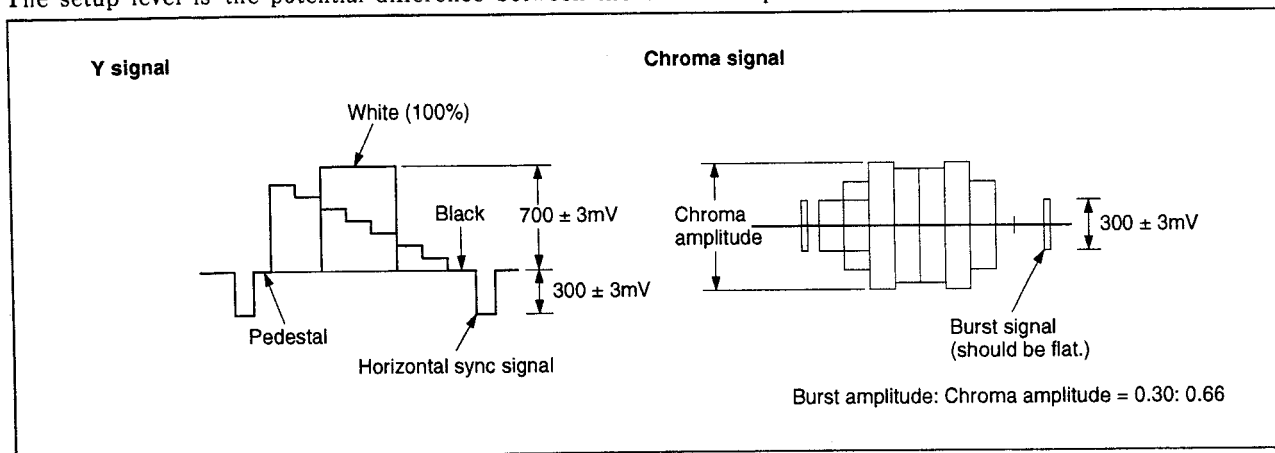


Fig. 7-2. Color-Bar Signal in Pattern Generator (during 75-ohm Termination)

2. During video (VIDEO) input

Connect an oscilloscope to the video input terminal, and confirm that the sync signal amplitude of a video signal is 300 mV, the amplitude of the video portion is 700 mV, the setup level is 0 mV, the amplitude of a burst signal is flat (300 mV), and the level ratio of a burst signal to a "red" signal is $0.30 : 0.66$.

The video signal (color-bar) used for the adjustment is shown in Fig. 7-3.

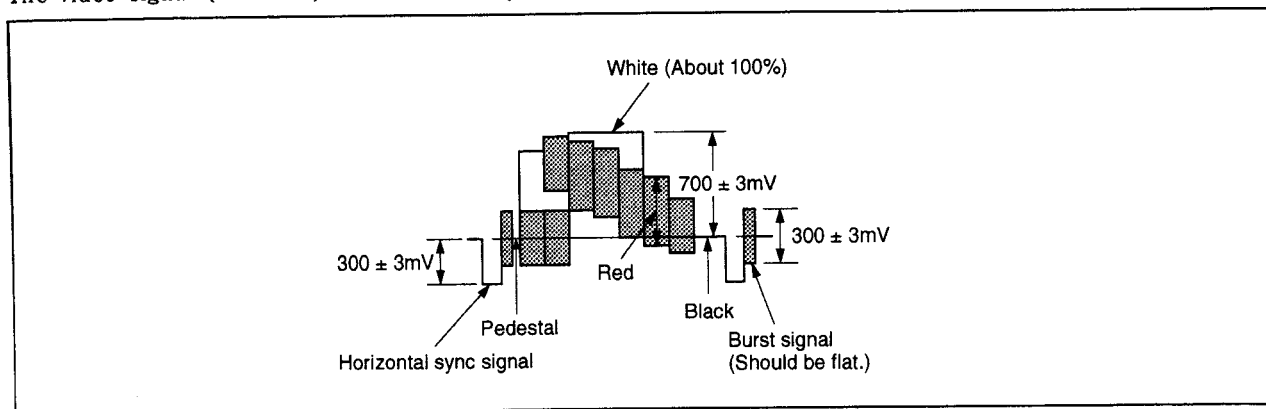


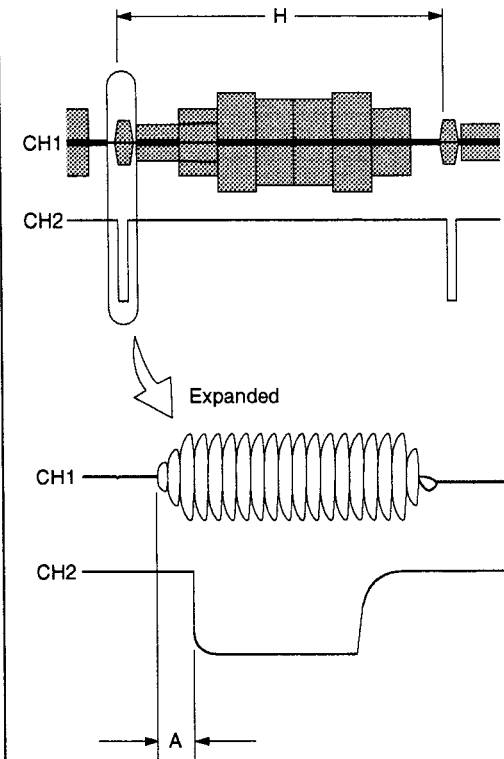
Fig. 7-3. Color-Bar Signal in Pattern Generator (during 75-ohm Termination)

7-2. VIDEO CIRCUIT ADJUSTMENT (VA-76 (B) BOARD)

7-2-1. INT/EXT Detection Level Adjustment

Conditions for adjustment	Spec.	Adjustment	
· Input signal: Color-bar (VIDEO) · Measurement equipment: Digital voltmeter	Measurement point: Pin ⑦ of IC106 or positive ("+" side of C103 $2.0 \pm 0.05 \text{ V DC}$	Adjustment page	F
		Adjustment address	22

7-2-2. BGP Phase Adjustment

Conditions for adjustment	Spec.	Adjustment
· Input signal: Color-bar (S VIDEO) · Measurement equipment: Oscilloscope	Measurement point: Pin ③② of C376 or IC311 (CH1) Pin ①⑩ of IC311 (CH2)  $A = 0.77 \pm 0.07 \mu \text{ sec}$	RV304

7-2-3. APC Free-Running Frequency Adjustment

Conditions for adjustment	Spec.	Adjustment
<ul style="list-style-type: none"> Input signal: Non-signal (with the input cable removed) Measurement equipment: Frequency counter 	Measurement point: Emitter of Q334 or Q328 Shortcircuit IC311 ② pin to ground and IC311 ③ pin to ground. $f = 4.433619 \text{ MHz} \pm 20\text{Hz}$	⚙ RV301

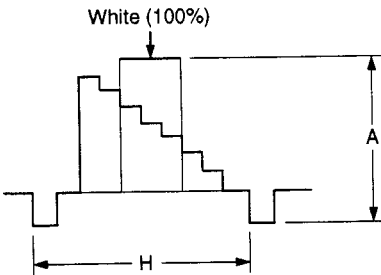
7-2-4. INT Sync Generator Frequency Adjustment

Conditions for adjustment	Spec.	Adjustment
<ul style="list-style-type: none"> Input signal: Non-signal (with all the input cables removed) Measurement equipment: Frequency counter 	Measurement point: Pin ② of IC130 or pin ① of IC128 $f = 4.433619 \text{ MHz} \pm 20 \text{ Hz}$	⚙ CT102

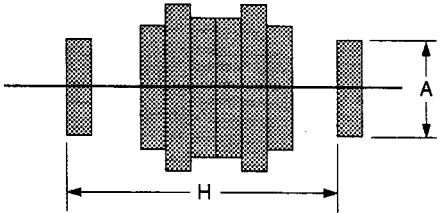
7-2-5. AFC Error Voltage Adjustment

Conditions for adjustment	Spec.	Adjustment
<ul style="list-style-type: none"> Input signal: Non-signal (with all the input cables removed) Measurement equipment: Digital voltmeter 	Measurement point: CC101 $-0.5 \pm 0.2 \text{ V DC}$	⚙ CT101

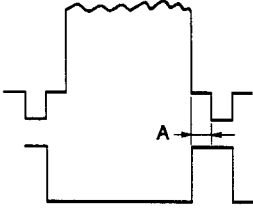
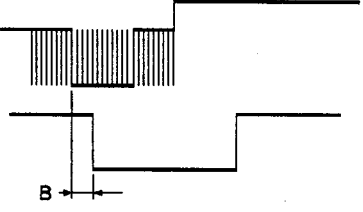
7-2-6. Y/C Separation Y-Level Adjustment

Conditions for adjustment	Spec.	Adjustment
<ul style="list-style-type: none"> Input signal: Color-bar (VIDEO) Measurement equipment: Oscilloscope 	Measurement point: Emitter of Q116 or Q218  $A = 1.00 \pm 0.03 \text{ V p-p}$	⚙ RV302

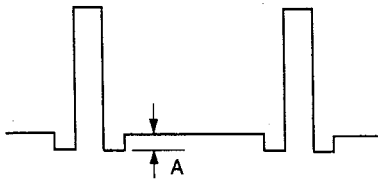
7-2-7. Y/C Separation Chroma-Level Adjustment

Conditions for adjustment	Spec.	Adjustment
<ul style="list-style-type: none"> Input signal: Color-bar (VIDEO) Measurement equipment: Oscilloscope 	<p>Measurement point: Emitter of Q121</p>  <p>$A = 300 \pm 30 \text{ mV p-p}$</p>	<p>RV303</p>

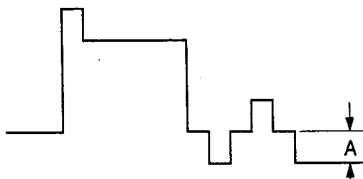
7-2-8. SYNC SEPA Phase Check

Conditions for adjustment	Spec.	Adjustment
<ul style="list-style-type: none"> Input signal: Color-bar (S VIDEO) Measurement equipment: Oscilloscope 	<p>Measurement point: IC110 ⑨ pin (Phase check of H SYNC and HD PULSE)</p>  <p>$A = 11.5 \pm 1.00 \mu \text{ sec}$</p> <p>Measurement point: CN102 ⑧ pin (Phase check of V SYNC and VD PULSE)</p>  <p>$B = 49.0 \pm 3.0 \mu \text{ sec}$</p>	

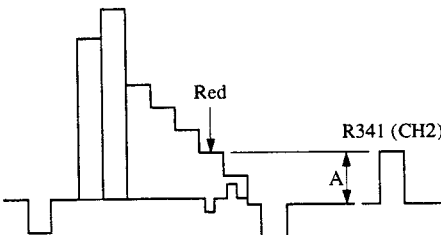
7-2-9. ABL Adjustment (1)

Conditions for adjustment	Spec.	Adjustment	
<ul style="list-style-type: none"> Input signal: Black burst (S VIDEO) Measurement equipment: Oscilloscope 	Measurement point: Emitter of Q302  $A = 20 \pm 20 \text{ mV}$	Adjustment page	F
		Adjustment address	28
		DATAE 80	

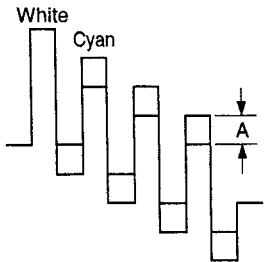
7-2-10. ABL Adjustment (2)

Conditions for adjustment	Spec.	Adjustment	
<ul style="list-style-type: none"> Input signal: Color-bar (S VIDEO) Measurement equipment: Oscilloscope 	Measurement point: CN101 ②③ pin or C348  $A = 20 \pm 20 \text{ mV}$	Adjustment page	F
		Adjustment address	18
		DATAE 80	

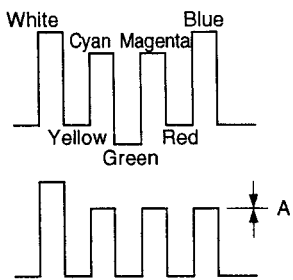
7-2-11. White REF Level Adjustment

Conditions for adjustment	Spec.	Adjustment	
<ul style="list-style-type: none"> Input signal: Color-bar (only Y)(S VIDEO) Measurement equipment: Oscilloscope 	Measurement point: R348 (CL304) (red) (CH1) R341 (white) (CH2)  Adjust so that the red (R340 or CL304) of a Y signal component coincides with the peak level of a white REF pulse (R341). $A = \text{Within } 20 \text{ mV}$	Adjustment page	F
		Adjustment address	17

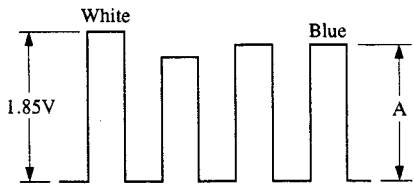
7-2-12. Decoder DL AMP DAT Adjustment

Conditions for adjustment	Spec.	Adjustment	
<ul style="list-style-type: none"> Input signal: Color-bar (S VIDEO) Measurement equipment: Oscilloscope 	<p>Measurement point: CN101 ② pin</p>  <p>$A = 0 \pm 100 \text{ mV}$</p> <p>Adjust address 2B and DL303 alternately.</p>	Adjustment page	F
		Adjustment address	2B
		:DL303	

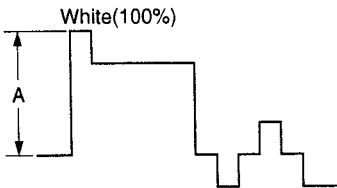
7-2-13. Decoder Color (1) Adjustment

Conditions for adjustment	Spec.	Adjustment	
<ul style="list-style-type: none"> Input signal: Color-bar 75% (S VIDEO) Measurement equipment: Oscilloscope 	<p>Measurement point: CN101 ② pin</p>  <p>$A = 0 \pm 50 \text{ mV}$</p> <p>(Adjust so that the difference in level of each color is zero ("0").)</p> <p>If the difference in level exists in each color, readjust the hue.</p>	Adjustment page	F
		Adjustment address	12

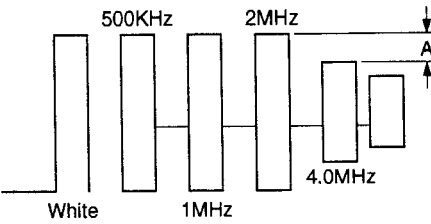
7-2-14. Decoder Color (2) Adjustment

Conditions for adjustment	Spec.	Adjustment	
<ul style="list-style-type: none"> Input signal: Color-bar (S VIDEO) Measurement equipment: Oscilloscope 	<p>Measurement point: Pin ② of CN101 (B OUT)</p>  <p>$A = 1.95 \pm 0.05 \text{ V p-p}$</p>	Adjustment page	F
		Adjustment address	12

7-2-15. AGC Level Adjustment

Conditions for adjustment	Spec.	Adjustment	
<ul style="list-style-type: none"> Input signal: Color-bar (S VIDEO) Measurement equipment: Oscilloscope 	Measurement point: CN103 ㉓ pin (G OUT)  $A = 1.85 \pm 0.05 \text{ V p-p}$	Adjustment page	F
		Adjustment address	1B

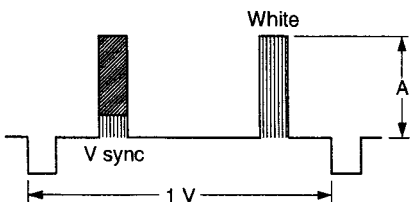
7-2-16. Decoder Sharpness Adjustment

Conditions for adjustment	Spec.	Adjustment	
<ul style="list-style-type: none"> Input signal: Multi-burst (S VIDEO) Measurement equipment: Oscilloscope 	Measurement point: IC301 ㉑ pin (The levels of 1 MHz and 4 MHz should be the same.)  $A = \text{Within } 0.1 \text{ V}$	Adjustment page	F
		Adjustment address	13

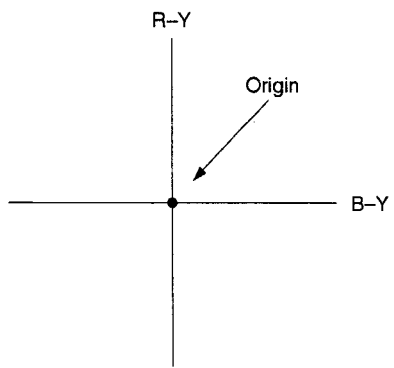
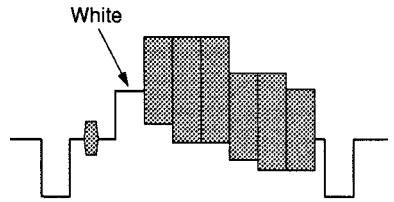
7-2-17. VRB CLP Reference Check

Conditions for adjustment	Spec.	Adjustment	
<ul style="list-style-type: none"> Input signal: No signal input Measurement equipment: Digital multimeter 	Measurement point: CN101 ㉔ pin (CLP REF) : $0.5 \pm 0.1 \text{ V}$		
	Measurement point: CN101 ㉕ pin (V RB) : $0.5 \pm 0.1 \text{ V}$		

7-2-18. OSD Level Adjustment

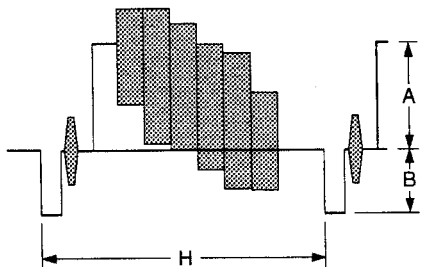
Conditions for adjustment	Spec.	Adjustment	
<ul style="list-style-type: none"> Input signal: No signal input Measurement equipment: Oscilloscope 	Measurement point: VIDEO OUT (75-ohm termination) <div style="text-align: center;">  </div> $A = 500 \pm 30 \text{ mV}$ (Y component of white character.)	Adjustment page	F
		Adjustment address	27

7-2-19. Encoder White Balance Adjustment

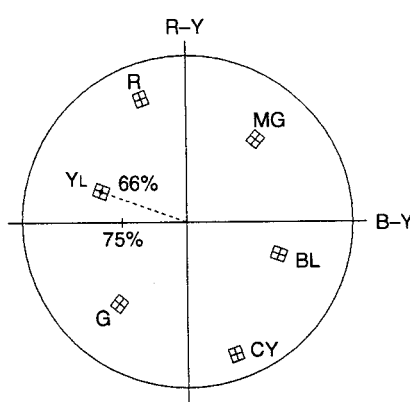
Conditions for adjustment	Spec.	Adjustment	
<ul style="list-style-type: none"> Mode: Input picture Input signal: Multi-burst (S VIDEO) Measurement equipment: Oscilloscope, Vectorscope, 75-ohm termination 	Measurement point: Video output terminal <ul style="list-style-type: none"> For vectorscope <div style="text-align: center;">  </div> <p>The white luminescent spot should coincide with the origin.</p> For oscilloscope <div style="text-align: center;">  </div> <p>Adjust so that the chroma signal component (3.58 MHz) that leaks to the white portion of an output waveform is minimum.</p> 	Adjustment page	F
		Adjustment address	20(ERG) 2A(EBG)

※Perform address 20 and 2A alternately.

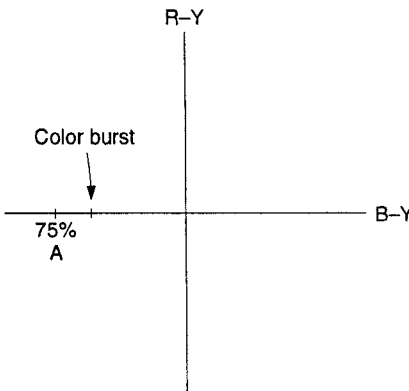
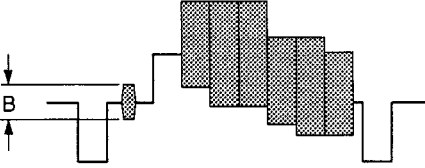
7-2-20. D/A REF Adjustment

Conditions for adjustment	Spec.	Adjustment	
<ul style="list-style-type: none"> Mode: Input picture Input signal: Color-bar (VIDEO) Measurement equipment: Oscilloscope 	Measurement point: Video output terminal (75-ohm termination)  $A = 485 \pm 20 \text{ mV}$ $B = 300 \pm 30 \text{ mV}$	Adjustment page	F
		Adjustment address	1A

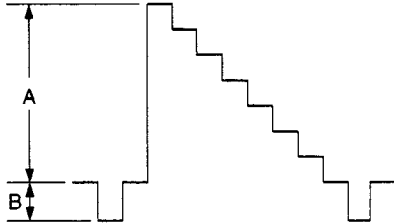
7-2-21. Encoder Chroma Level Adjustment

Conditions for adjustment	Spec.	Adjustment	
<ul style="list-style-type: none"> Mode: Input picture Input signal: Color-bar (VIDEO) Measurement equipment: Vectorscope Video output terminal in 75-ohm termination 	Measurement point: Video output terminal (Adjust the saturation level of yellow to 66%) <ul style="list-style-type: none"> For Vectorscope  <ul style="list-style-type: none"> 87% of length between center of yellow " " and cross point of R-Y and B-Y axes. For Oscilloscope Yellow, Blue: $430 \pm 20 \text{ mV p-p}$ Cyan, Red: $610 \pm 20 \text{ mV p-p}$ Magenta, Green: $566 \pm 20 \text{ mV p-p}$	Adjustment page	F
		Adjustment address	23

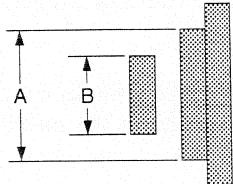
7-2-22. Encoder Color Burst Level Adjustment

Conditions for adjustment	Spec.	Adjustment	
<ul style="list-style-type: none"> Mode: Input picture Input signal: Non-signal Measurement equipment: Vectorscope 	Measurement point: Video output (in 75-ohm termination)	Adjustment page	F
		Adjustment address	24
	<ul style="list-style-type: none"> For Vectorscope  <p>A: Saturation point one piece</p> <ul style="list-style-type: none"> For Oscilloscope  <p>$B = 300 \pm 10 \text{ mV p-p}$</p>		

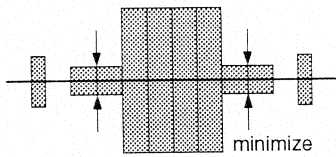
7-2-23. S Video Output Y Level Adjustment

Conditions for adjustment	Spec.	Adjustment
<ul style="list-style-type: none"> Mode: Input picture Input signal: Color-bar (VIDEO) Measurement equipment: Oscilloscope S video output Y terminal in 75-ohm termination 	Measurement point: S VIDEO OUT. CN502 ③ pin(Y)	
	 <p>$A = 485 \pm 20 \text{ mV}$ $B = 300 \pm 30 \text{ mV}$</p>	

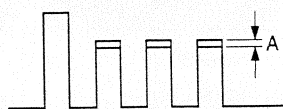
7-2-24. S Video Output Chroma Level Adjustment

Conditions for adjustment	Spec.	Adjustment
<ul style="list-style-type: none"> Mode: Input picture Input signal: Color-bar (VIDEO) Measurement equipment: Oscilloscope S video output C terminal in 75-ohm termination 	<p>Measurement point: S VIDEO OUT. CN502 ⑤ pin(C)</p>  <p> $A = 430 \pm 30 \text{ mV}$ $B = 300 \pm 30 \text{ mV}$ </p>	

7-2-25. Decoder Hue Adjustment

Conditions for adjustment	Spec.	Adjustment	
<ul style="list-style-type: none"> Input signal: Unti PAL signal (SG-408P) (S VIDEO) Measurement equipment: Oscilloscope 	<p>Measurement point: CN502 ⑤ pin (S VIDEO OUT)</p> 	Adjustment page	F
		Adjustment address	11

7-2-26. Decoder DL AMP DAT Adjustment

DL-20: Decoder DL AMP DAT Adjustment			
Conditions for adjustment	Spec.	Adjustment	
<ul style="list-style-type: none">Input signal: Color-bar (S VIDEO)Measurement equipment: Oscilloscope	<p>Measurement point: CN101 ② pin(B OUT)</p>  <p>A = Within ± 20 mV</p>	Adjustment page	F
		Adjustment address	28
		DL303 ※ DL303 and address should be adjusted alternately.	

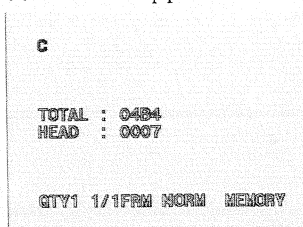
7-3. SERVICE MODE

7-3-1. Entering the Service Mode

* Test signal

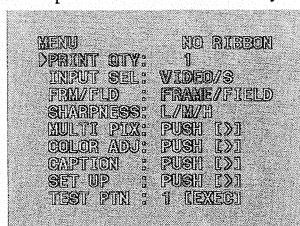
1. Turn on the power switch of the main unit while pressing the STOP and MEMORY IN keys simultaneously.

* The "COLOR VIDEO PRINTER" display blinks on the monitor screen. Press these keys until the motor is loaded and stopped in the meantime, then release them. The screen below then appears.

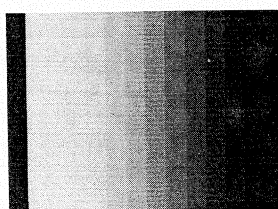


7-3-2. Entering the Print Operation of Pattern Signal

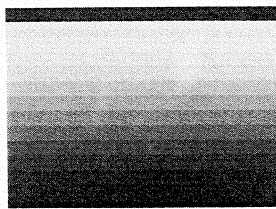
- 1) Press the SOURCE/MEMORY key on the above screen to display the memory screen and press the menu key. The screen below then appears.



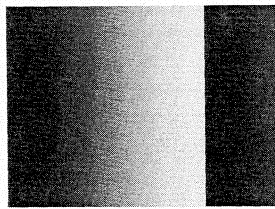
- 2) Move the cursor to TEST PTN by cursor keys (Δ and ∇) and select the desired pattern from among the eight patterns below by cursor keys (\triangleleft and \triangleright).



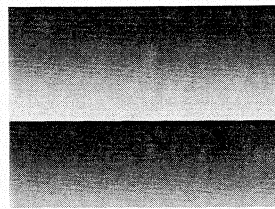
STAIRSTEP H



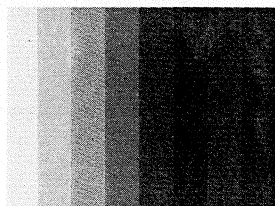
STAIRSTEP V



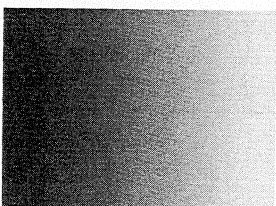
RAMP H



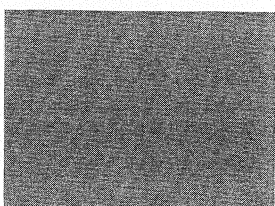
RAMP V



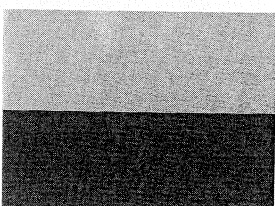
COLOR BAR H



ADJUST RAMP



ADJUST 8081



ADJUST AA55

- 3) The screen becomes black when the EXEC key is pressed. (The PLEASE WAIT display then blinks.)
- 4) Press the PRINT key to print and output a pattern.
- 5) To change the pattern, execute step (2) and press the EXEC key. Then, print and output the pattern using a PRINT key.

7-3-3. Entering the Print Number Counter

* Use the counter during head replacement.

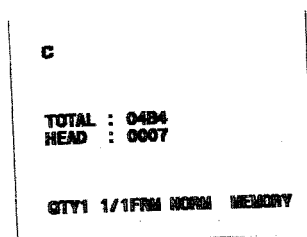
- 1) Insert an adjustment tool RM-95 (J-6082-053-A) remote controller into J-101 on the VA-76 board (with the power turned on).
- 2) To cancel a protector by RM-95, set as shown below.

Page	6	Data	80	Address	00
------	---	------	----	---------	----

- 3) Set as shown below by a remote controller.

Page	F	Data	00 H	Address	EE
Page	F	Data	00 H	Address	EE

* Press the PAUSE key and turn off the power. The counter is then reset.



HEAD : 0000

Total : Accumulated total

*The accumulated total cannot be reset.

7-3-4. Replacing the Head

Head position adjustment tool handling (J-9000-250-A)

1. Print two sheets of stair step signals (H) before head replacement (for comparison of each density).
2. Disconnect 10-pin and 12-pin flat cables from the HM board. (Fig. 1)

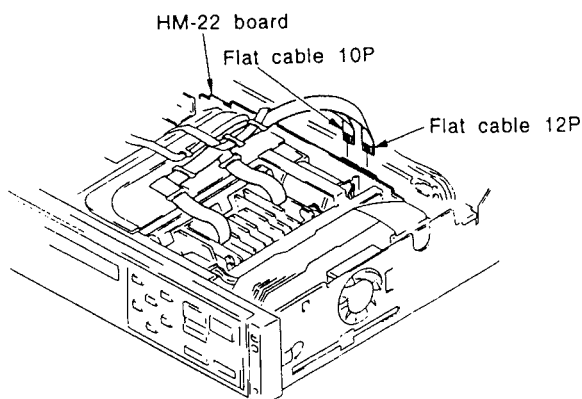


Fig. 1

3. Remove the ribbon guide from the head. (Fig. 2)

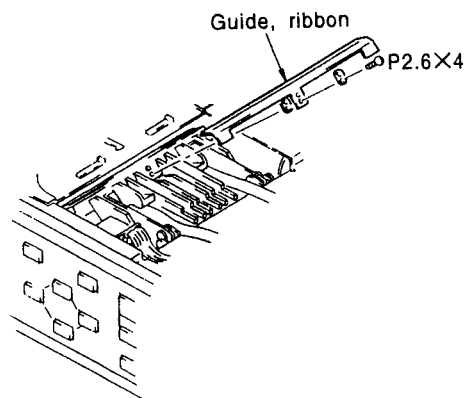


Fig. 2

4. Attach portion R of the Head position adjustment tool (J-9000-250-A) to the shaft of a platen roller. (Fig. 3)

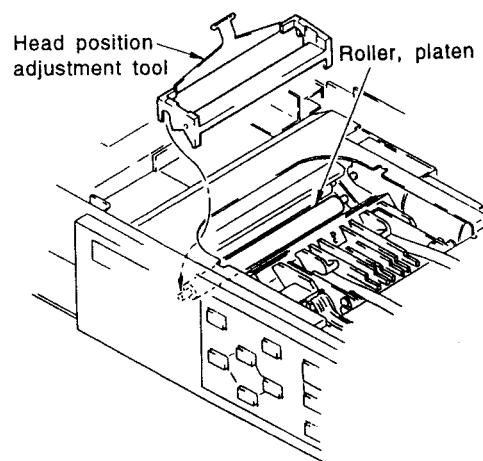


Fig. 3

5. Loosen the two screws, set as shown below by RM-95, and press the PAUSE button.

Page	8	Data	01	Address	10
------	---	------	----	---------	----

6. Move the head position upward and set as shown below.

Page	8	Data	01	Address	1A
------	---	------	----	---------	----

The head position moves upward every time the PAUSE button is pressed. Move the head upward from the home position by three steps. (Fig. 4)

(Head has five positions. 0 → 1 → 2 → 3 → 4)

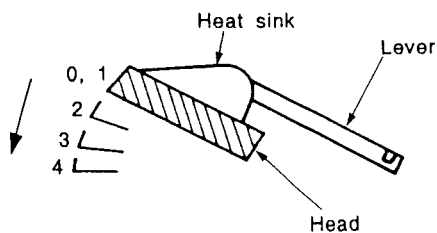


Fig. 4 Five Positions of the Head

7. Tighten the two screws and return the head to the home position. Remove the tool.

Page	8	Data	08	Address	10
------	---	------	----	---------	----

8. Attach the ribbon guide and flat cables.
9. Print two sheets of stair step signals (H) and compare the second sheet with the sheet printed before head replacement to adjust the density.
(For more details, refer to the electrical adjustment and head replacement in Service Manual.)

7-4. HEAD REPLACEMENT

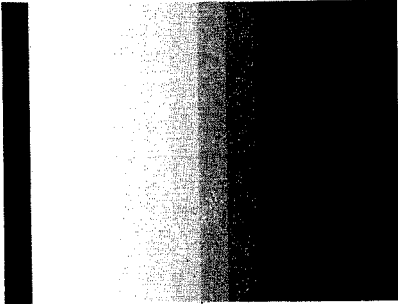
7-4-1. Adjustment

1) Mechanical block

Thermal head replacement (Refer to "Printing the Test Signal by RM-95*")

- (1) Print two sheets of paper via the defective head using a stairstep signal (H) before replacing the thermal head. Use the second sheet of paper for comparison of uneven image density.

After the thermal head was replaced, print two sheets of paper using a stairstep signal (H). Adjust so that the second sheet of printed paper is equal in density to the second sheet of paper printed before replacement.

Conditions for adjustment	Spec.	Adjustment
<ul style="list-style-type: none">· Mode: Memory picture^{※1}· Input signal: Stairstep signal (H)^{※2}	<p>Should be equal to the sample image.</p> 	<p>⊙ VR201^{※3}</p>

※1 Press the MEMORY IN or SOURCE/MEMORY button of the unit.

※2 Refer to the stairstep signal (H) in "Entering the Test Signal".

※3 Adjust using VR201 on the power board while pressing switch S705 on the HM board.
[Voltage ⊕(thick); voltage ⊖(thin)]

SONY.

SP00001

COLOR VIDEO PRINTER

UP-1200A

UP-1200AEPM

SERVICE MANUAL

SUPPLEMENT-1

Please add and replace your manual with this SUPPLEMENT-1.

SUBJECT

- EXPLODED VIEWS
 - ELECTRICAL PARTS LIST
-

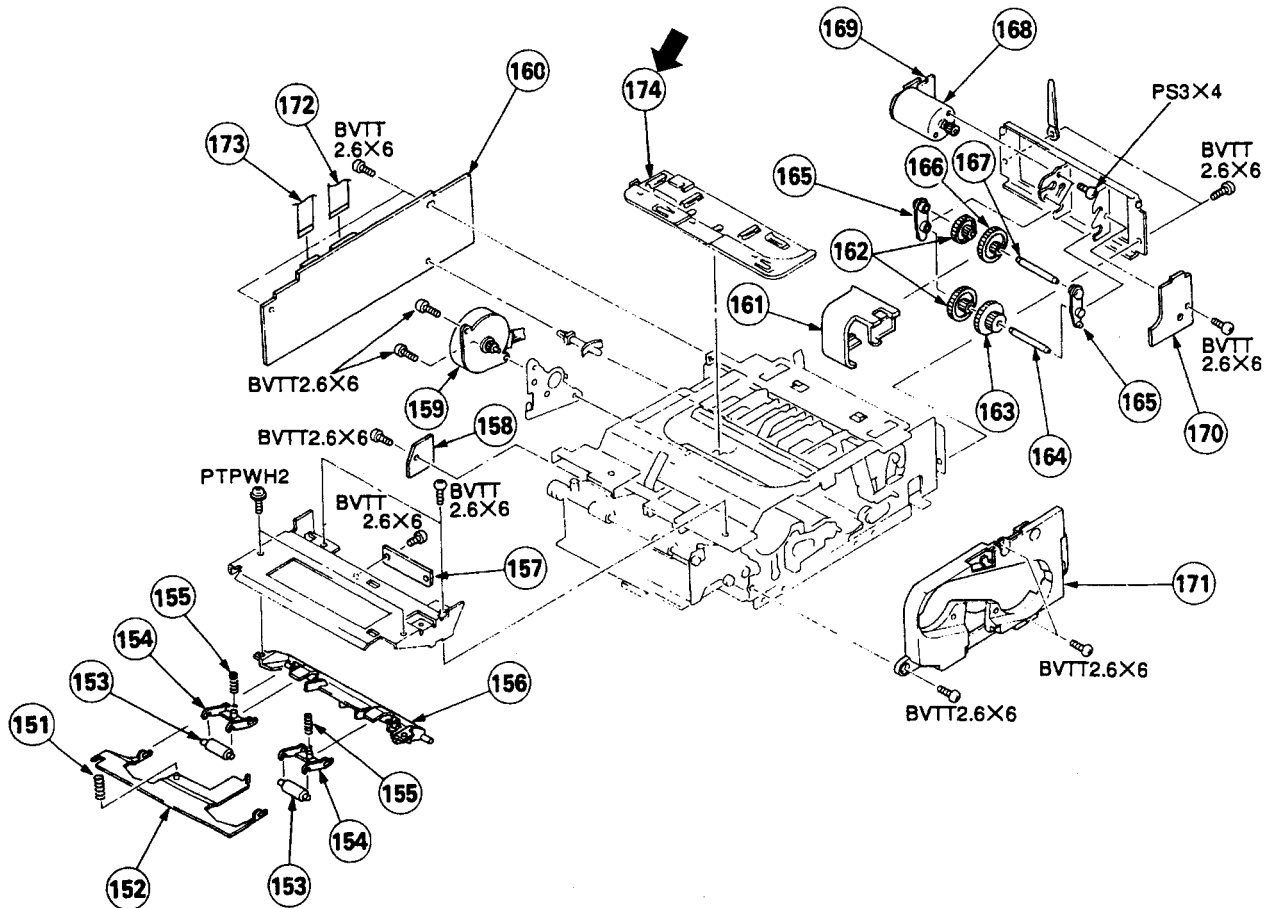
1. CORRECT FOLLOWING ITEMS IN THE SERVICE MANUAL.


Page	Incorrect		Correct
166	102	3-183-605-02 LEVER, PAPER SENSOR	⇒ 3-183-185-03 LEVER, PAPER SENSOR
169	275	*3-950-003-01 GUIDE (1) , CASSETTE	⇒ *3-191-701-01 GUIDE (PRT1) , CASSETTE
189	IC403	8-752-093-18 IC UPD23C1001EAGW-355E2	⇒ 8-759-344-94 IC MX23C1010-A12M
	IC404	8-752-093-17 IC UPD23C1001EAGW-354E2	⇒ 8-759-473-62 IC MSM531001B-64GS-KR1
190	IC501	8-759-352-14 IC HM51L240CS7-EL	⇒ 8-759-392-74 IC MB814400C-70PJN-T6
	IC502	8-759-352-14 IC HM51L240CS7-EL	⇒ 8-759-392-74 IC MB814400C-70PJN-T6
	IC503	8-759-352-14 IC HM51L240CS7-EL	⇒ 8-759-392-74 IC MB814400C-70PJN-T6
	IC504	8-759-093-89 IC HM51L240AS7-EL	⇒ 8-759-392-74 IC MB814400C-70PJN-T6
	IC505	8-759-093-89 IC HM51L240AS7-EL	⇒ 8-759-392-74 IC MB814400C-70PJN-T6
	IC506	8-759-093-89 IC HM51L240AS7-EL	⇒ 8-759-392-74 IC MB814400C-70PJN-T6
	IC901	8-759-325-71 IC MB89098PFV-G-114-BND	⇒ 8-759-437-71 IC MB89098RPFV-G-144-BND (UP-1200A)
			⇒ 8-759-463-25 IC MB89098RPFV-G-155-BND (UP-1200AEPM)
193	IC708	8-752-863-53 IC CXP80P116Q	⇒ 8-752-888-04 IC CXP80116-419Q (UP-1200A)
			⇒ 8-752-888-03 IC CXP80116-418Q (UP-1200AEPM)
	IC704	8-759-344-54 IC IDT6116SA25SO	⇒ 8-759-458-13 IC MSM531001B-62GS-KR1
194	R789	1-216-837-11 METAL 22k 5% 1/16W	⇒ 1-216-839-11 METAL 33k 5% 1/16W
	R797	1-216-837-11 METAL 22k 5% 1/16W	⇒ 1-216-839-11 METAL 33k 5% 1/16W
	R809	1-216-837-11 METAL 22k 5% 1/16W	⇒ 1-216-839-11 METAL 33k 5% 1/16W
	R844	1-216-837-11 METAL 22k 5% 1/16W	⇒ 1-216-839-11 METAL 33k 5% 1/16W
	R853	1-216-837-11 METAL 22k 5% 1/16W	⇒ 1-216-839-11 METAL 33k 5% 1/16W
195		<CRYSTAL>	⇒ <VIBRATOR>
	X701	1-579-907-21 VIBRATOR, CERAMIC	⇒ 1-579-907-21 VIBRATOR, CERAMIC (UP-1200A)
			⇒ 1-579-906-21 VIBRATOR, CERAMIC (UP-1200AEPM)
	X703	1-579-906-21 VIBRATOR, CERAMIC	⇒ 1-579-906-21 VIBRATOR, CERAMIC (UP-1200A)
			⇒ 1-579-905-21 VIBRATOR, CERAMIC (UP-1200AEPM)

Page	Incorrect	Correct
226	7-2-13. Decoder Color (1) Adjustment	⇒ delete
227	7-2-16. Decoder Sharpness Adjustment (Measurement point) IC301	⇒ IC311
229	7-2-20. D/A REF Adjustment A = 485 ± 20 mV B = 300 ± 30 mV	⇒ A = 700 ± 20 mV
	7-2-21. Encoder Chroma Level Adjustment 87 % of length between center of yellow "田" and cross point of R-Y and B-Y axes.	⇒ Match the luminance spot of G-ch signal to "田" mark.
	Yellow, Blue : 430 ± 20 mVp-p Cyan, Red : 610 ± 20 mVp-p Magenta, Green : 566 ± 20 mVp-p	⇒ Adjust the level difference between white peak level and chroma level to 0 mV. A = 0 ± 20 mV
230	7-2-23. S Video Output Y Level Adjustment	⇒ delete
231	7-2-24. S Video Output Chroma Level Adjustment	⇒ delete

 : added portion

5-4. MECHANISM DECK ASSEMBLY(1)



Ref.No	PartNo.	Description	Remark	Ref.No	PartNo.	Description	Remark
151	3-183-629-01	SPRING, COMPRESSION (PAPER A)		163	3-950-015-01	GEAR (B), HEAD DRIVE	
152	3-183-605-01	SENSOR LEVER		164	*3-950-020-01	SHAFT, HEAD DRIVE GEAR	
153	3-950-009-01	ROLLER, PAPER		165	*3-950-017-01	HOLDER, HEAD DRIVE GEAR	
154	3-950-010-01	ARM, PAPER ROLLER		166	3-956-727-01	GEAR (E), HEAD DRIVE	
155	3-950-013-01	SPRING, COMPRESSION		167	*3-950-214-01	SHAFT (S), HEAD DRIVE GEAR	
156	3-183-609-02	GUIDE, UPPER		168	X-3942-122-1	MOTOR, HEAD DRIVE GEAR ASSY	
157	*A-8275-442-A	SW-41 BOARD, COMPLETE		169	*A-8275-435-A	SW-215 BOARD, COMPLETE	
158	*A-8275-441-A	SW-213 BOARD, COMPLETE		170	*A-8275-436-A	SW-212 BOARD, COMPLETE	
159	X-3942-126-1	MOTOR ASSY, STEPPING		171	X-3167-377-1	GUIDE ASSY, CASSETTE ENTRANCE	
160	*A-8275-449-A	HM-22(L) BOARD, COMPLETE (UP-1200A)		172	1-765-052-11	WIRE, FLAT TYPE (16 CORE)	
160	*A-8274-819-A	HM-22P(L) BOARD, COMPLETE (UP-1200AEPM)		173	1-765-051-11	WIRE, FLAT TYPE (7 CORE)	
161	*3-952-505-01	GUARD, HEAD GEAR		174	3-952-129-02	CLAMP, HEAD HARNESS	
162	3-950-019-01	GEAR (A), HEAD DRIVE					

SWITCHING REGULATOR

Ref.No	PartNo.	Description	Remark	Ref.No	PartNo.	Description	Remark
There are many mistakes in Switching Regulator part list. Therefore, use the following Switching regulator part list instead.				CN903	1-568-792-11	CONNECTOR 15P	
*****				CN904	1-506-468-11	CONNECTOR 3P	
△ *1-413-942-21 SWITCHING, REGULATOR (UP-1200A) *****				CN905	1-506-468-11	CONNECTOR 3P	
				CN906	1-564-013-31	CONNECTOR 3P	
				CN907	1-568-779-11	CONNECTOR 2P	
				<DIODE>			
				D101	8-719-500-57	DIODE D3SBA40	
				D102	9-996-310-01	DIODE AG01A	
				D103	8-719-313-16	DIODE AU02A	
				D104	9-907-090-01	DIODE RD47E	
				D105	8-719-114-97	DIODE RD24JSB	
				D106	8-719-200-02	DIODE 10E-2	
				D107	9-900-514-01	DIODE GMA01	
				D108	9-902-050-01	DIODE RM11C	
				D109	9-900-514-01	DIODE GMA01	
				D201	8-719-501-34	DIODE S3VC40R	
				D202	8-719-501-34	DIODE S3VC40R	
				D203	8-719-200-02	DIODE 10E-2	
				D204	9-900-535-01	DIODE AU02A	
				D205	9-904-797-01	DIODE RK44	
				D206	9-904-797-01	DIODE RK44	
				D207	8-719-501-34	DIODE S3VC40R	
				D208	8-719-160-68	DIODE RD18FB2	
				D209	8-719-982-04	DIODE ERB81-004	
				D210	9-904-799-01	DIODE MA2120	
				<FUSE>			
				F101	9-907-103-01	FUSE 4A 250V	
				<IC>			
				IC101	9-904-782-01	IC STR-S6525	
				IC102	8-759-985-13	IC MA2430	
				IC201	8-759-420-19	IC AN1431T	
				IC202	8-759-135-80	IC UPC358C	
				IC203	8-759-420-19	IC AN1431T	
				IC204	8-759-420-19	IC AN1431T	
				IC205	8-749-920-43	IC SI-3050CA	
				IC206	8-749-921-21	IC SI-3120C	
				IC207	8-749-920-43	IC SI-3050CA	
				IC208	8-749-920-43	IC SI-3050CA	
				<COIL>			
				L101	9-907-229-01	FILTER	
				L102	9-907-229-01	FILTER	
				L103	9-904-796-01	BEADS CORE	
				L104	9-904-796-01	BEADS CORE	
				L201	9-902-553-01	BEADS CORE	
				L202	9-902-553-01	BEADS CORE	
				L203	9-907-112-01	CHOKE COIL	
				L204	9-902-553-01	BEADS CORE	
				L205	9-907-112-01	CHOKE COIL	
				L206	9-902-553-01	BEADS CORE	
				<CAPACITOR>			
C101	1-136-192-11	CERAMIC	0.33MF 250V				
C102	9-902-038-01	CERAMIC	0.22MF 250V				
C103	9-907-227-01	CERAMIC	470PF 125V				
C104	9-907-227-01	CERAMIC	470PF 125V				
C106	9-907-097-01	ELECT	470MF 200V				
C107	9-900-522-01	CERAMIC	2200PF 400V				
C108	9-900-525-01	CERAMIC	0.047MF 630V				
C109	9-907-098-01	CERAMIC	220PF 1KV				
C110	1-130-491-00	CERAMIC	0.047MF 50V				
C111	1-124-122-11	ELECT	100MF 50V				
C112	1-126-967-11	ELECT	47MF 50V				
C113	9-900-525-01	CERAMIC	0.047MF 630V				
C114	9-907-098-01	CERAMIC	220PF 1KV				
C115	1-128-578-91	ELECT	1MF 100V				
C116	1-130-495-00	FILM	0.1MF 50V				
C117	1-130-483-00	FILM	0.1MF 50V				
C201	9-907-113-01	CERAMIC	1000PF 1KV				
C202	9-907-114-01	ELECT	1000MF 35V				
C203	1-124-906-11	ELECT	4.7MF 50V				
C204	9-907-114-01	ELECT	1000MF 35V				
C205	1-126-965-51	ELECT	22MF 50V				
C207	1-130-483-00	FILM	0.01MF 50V				
C208	9-907-113-01	CERAMIC	1000PF 1KV				
C209	1-126-927-11	ELECT	2200MF 10V				
C210	1-126-927-11	ELECT	2200MF 10V				
C211	1-124-903-11	ELECT	1MF 50V				
C212	1-126-926-11	ELECT	1000MF 10V				
C213	1-126-933-11	ELECT	100MF 10V				
C214	1-126-933-11	ELECT	100MF 10V				
C215	9-907-113-01	CERAMIC	1000PF 1KV				
C216	1-124-557-11	ELECT	1000MF 25V				
C217	1-216-933-11	ELECT	100MF 16V				
C218	1-126-926-11	ELECT	1000MF 10V				
C219	1-126-933-11	ELECT	100MF 10V				
C220	1-130-483-00	FILM	0.01MF 50V				
C221	1-130-491-00	FILM	0.047MF 50V				
C222	1-124-122-11	ELECT	100MF 50V				
				<CONNECTOR>			
CN1	9-907-104-01	CONNECTOR 4P					
CN2	9-907-105-01	CONNECTOR 2P					
CN3	9-907-105-01	CONNECTOR 2P					
CN901	1-560-892-00	CONNECTOR 4P					
CN902	1-560-894-00	CONNECTOR 6P					

The components identified by shading and mark △ are critical for safety.
Replace only with part number specified.

Les composants identifiés par une trame et une marque △ sont critiques pour la sécurité.
Ne les remplacer que par une pièce portant le numéro spécifié.

SWITCHING REGULATOR

Ref.No	PartNo.	Description	Remark	Ref.No	PartNo.	Description	Remark
<PHOTO COUPLER>				R219	1-247-855-31	CARBON 10K	1/4W
PC101	8-719-161-00	PHOTO COUPLER PS2501		R220	1-214-736-00	FILM 2K	1/4W
PC102	8-719-161-00	PHOTO COUPLER PS2501		R221	1-214-753-00	FILM 10K	1/4W
PC201	8-719-161-00	PHOTO COUPLER PS2501		R222	1-260-083-11	CARBON 47	1/2W
<TRANSISTOR>				R223	1-244-417-11	CARBON 1K	1/4W
Q101	9-904-781-01	TRANSISTOR 2SC2061		R224	1-249-419-11	CARBON 1.5K	1/4W
Q201	8-729-900-80	TRANSISTOR DTC114ES		R225	1-247-855-31	CARBON 10K	1/4W
Q202	8-729-900-80	TRANSISTOR DTC114ES		R226	9-907-107-01	METAL OXIDE 430	1/4W
Q203	8-729-900-80	TRANSISTOR DTC114ES			9-907-094-01	METAL OXIDE 1.2K	1/4W
Q204	8-729-900-80	TRANSISTOR DTC114ES		R227	9-907-108-01	CARBON 0.22	1/4W
Q205	8-729-900-80	TRANSISTOR DTC114ES		R228	9-907-108-01	CARBON 0.22	1/4W
<RESISTOR>				R229	9-907-109-01	METAL OXIDE 1.3K	1/4W
R101	1-202-719-00	SOLID 1M	1/2W		9-907-107-01	METAL OXIDE 430	1/4W
R102	9-904-783-01	THERMISTOR 5	25°C	R230	1-249-416-11	CARBON 820	1/4W
R103	9-907-225-01	FILM 47K	1W	R231	1-249-414-11	CARBON 560	1/4W
R104	9-907-225-01	FILM 47K	1W	<RELAY>			
R105	1-247-887-00	CARBON 220K	1/4W	RL201	9-907-115-01	RELAY	
R106	1-247-887-00	CARBON 220K	1/4W	<TRANSFORMER>			
R107	1-215-925-11	FILM 22K	3W	T101	9-904-792-01	SWITCHING	
R108	1-215-925-11	FILM 22K	3W	T102	9-907-228-01	SWITCHING	
R109	1-215-882-00	FILM 22	2W	<VARIABLE RESISTOR>			
R110	9-904-784-01	METAL 0.15	2W	VR201	9-907-110-01	RES, VER, CARBON 2K	1/10W
R111	1-260-064-11	CARBON 1	1/2W	VR202	9-907-111-01	RES, VER, CARBON 500	1/10W
R112	1-260-080-11	CARBON 27	1/2W	VR203	1-238-570-11	RES, VER, CARBON 2.2K	1/10W
R113	1-247-855-31	CARBON 10K	1/4W	VR204	1-238-570-11	RES, VER, CARBON 2.2K	1/10W
R114	1-249-412-11	CARBON 390	1/4W	*****			
R115	1-249-437-11	CARBON 47K	1/4W				
R116	1-249-411-11	CARBON 330	1/4W				
R117	1-249-423-11	CARBON 3.3K	1/4W				
R118	1-249-441-11	CARBON 100K	1/4W				
R119	1-249-441-11	CARBON 100K	1/4W				
R120	1-249-433-11	CARBON 22K	1/4W				
R121	1-215-927-00	FILM 47K	3W				
R122	1-215-927-00	FILM 47K	3W				
R123	9-904-899-01	CARBON 15	1W				
R124	9-907-226-01	CARBON 22	1W				
R125	1-260-087-11	CARBON 100	1/2W				
R126	1-249-408-11	THERMISTOR 180	1/4W				
R201	1-215-916-00	FILM 680	3W				
R202	1-215-916-00	FILM 680	3W				
R203	1-260-099-11	CARBON 1K	1/2W				
R204	1-247-855-31	CARBON 10K	1/4W				
R205	1-247-855-31	CARBON 10K	1/4W				
R206	1-249-420-11	CARBON 1.8K	1/4W				
R207	1-249-417-11	CARBON 1K	1/4W				
R208	1-249-423-11	CARBON 3.3K	1/4W				
R209	1-249-415-11	CARBON 680	1/2W				
R210	9-902-556-01	METAL 1	1/4W				
R211	1-247-855-31	CARBON 10K	1/4W				
R212	9-904-801-01	FILM 8.25K	1/4W				
R213	1-247-855-31	CARBON 10K	1/4W				
R214	1-247-855-31	CARBON 10K	1/4W				
R215	1-247-855-31	CARBON 10K	1/4W				
R216	1-247-855-31	CARBON 10K	1/4W				
R217	1-249-425-11	CARBON 4.7K	1/4W				
R218	1-247-855-31	CARBON 10K	1/4W				

SWITCHING REGULATOR

Ref. No. or Q'ty	Part No.	SP Description
1pc	Δ 1-413-946-21	o SWITCHING, REGULATOR (UP-1200AEPM)
2pcs	9-904-821-01	s FUSE CLIP
1pc	9-907-116-01	o HEAT SINK (IC101, IC102)
1pc	9-907-117-01	o HEAT SINK (IC103)
3pcs	9-907-118-01	o HEAT SINK (IC205, IC206, IC207, IC208)
1pc	9-907-119-01	o PRINTED CIRCUIT BOARD
1pc	9-907-120-01	s SPACER
2pcs	9-907-121-01	o SHEET, INSULATING
1pc	9-907-122-01	o SHEET, INSULATING
C101	1-137-472-11	s FILM 0.68uF 250V
C102	9-902-038-01	s FILM 0.22uF 250V
C103	9-909-242-01	s CERAMIC 1000PF 250V
C104	9-909-242-01	s CERAMIC 1000PF 250V
C105	9-907-096-01	s CERAMIC 4700PF 250V
C106		s ELECT 220uF 400V
C107	9-900-522-01	s CERAMIC 2200PF 250V
C108	9-900-525-01	s FILM 0.047uF 630V
C109	9-907-098-01	s CERAMIC 220PF 1KV
C110	1-130-491-00	s FILM 0.047uF 50V
C111	1-124-122-11	s ELECT 100uF 50V
C112	1-126-967-11	s ELECT 47uF 50V
C113	9-900-525-01	s FILM 0.047uF 630V
C114	9-907-098-01	s CERAMIC 220PF 1KV
C115	1-126-964-11	s ELECT 10uF 50V
C116	1-130-495-00	s FILM 0.1uF 50V
C118	9-909-242-01	s CERAMIC 1000PF 250V
C119	9-909-242-01	s CERAMIC 1000PF 250V
C120	9-907-096-01	s CERAMIC 4700PF 250V
C121		s ELECT 220uF 400V
C122	1-130-491-00	s FILM 0.047uF 50V
C123	1-136-189-00	s FILM 0.1uF 250V
C124	1-136-189-00	s FILM 0.1uF 250V
C125	9-907-099-01	s FILM 4.7uF 400V
C126	1-124-903-11	s FILM 1uF 50V
C201	9-907-113-01	s CERAMIC 1000PF 1KV
C202	9-907-114-01	s ELECT 1000uF 35V
C203	1-124-927-11	s ELECT 4.7uF 100V
C204	9-907-114-01	s ELECT 1000uF 35V
C205	1-126-233-11	s ELECT 22uF 50V
C207	1-130-483-00	s FILM 0.01uF 50V
C208	9-907-113-01	s CERAMIC 1000PF 1KV
C209	1-126-927-11	s ELECT 2200uF 10V
C210	1-126-927-11	s ELECT 2200uF 10V
C211	1-124-903-11	s ELECT 1uF 50V
C212	1-126-926-11	s ELECT 1000uF 10V
C213	1-126-933-11	s ELECT 100uF 16V
C214	1-126-933-11	s ELECT 100uF 16V
C215	9-907-113-01	s CERAMIC 1000PF 1KV
C216	1-124-557-11	s ELECT 1000uF 25V
C217	1-126-933-11	s ELECT 100uF 16V
C218	1-126-926-11	s ELECT 1000uF 10V
C219	1-126-933-11	s ELECT 100uF 16V
C220	1-130-483-00	s FILM 0.01uF 50V
C222	1-124-122-11	s ELECT 100uF 50V
CN1	9-907-104-01	s CONNECTOR 4P
CN2	9-907-105-01	s CONNECTOR 2P
CN3	9-907-105-01	s CONNECTOR 2P
CN901	1-560-892-00	s CONNECTOR 4P
CN902	1-560-894-00	s CONNECTOR 6P
CN903	1-568-702-11	s CONNECTOR 15P
CN904	1-506-468-11	s CONNECTOR 3P

(SWITCHING REGULATOR)

Ref. No. or Q'ty	Part No.	SP Description
CN905	1-506-468-11	s CONNECTOR 3P, BLACK
CN906	1-564-013-31	s CONNECTOR 3P, RED
CN907	1-568-779-11	s CONNECTOR 2P
D101	8-719-500-58	s BRIGE DIODE D3SBA60
D102	8-719-030-25	s DIODE EGO1C-V0
D103	8-719-313-16	s DIODE AU02A
D104	9-907-090-01	s DIODE RD47E
D105	8-719-114-97	s DIODE RD24JSB
D106	8-719-200-82	s DIODE 11ES2
D107	1-806-836-11	s DIODE MA165
D108	8-719-304-63	s DIODE RM11C
D109	1-806-836-11	s DIODE MA165
D110	8-719-304-63	s DIODE RM11C
D111	8-719-304-63	s DIODE RM11C
D201	8-719-501-34	s DIODE S3VC40R
D202	8-719-501-34	s DIODE S3VC40R
D203	8-719-200-82	s DIODE 11ES2
D204	8-719-313-16	s DIODE AU02A
D205	9-903-219-01	s DIODE RK44
D206	9-903-219-01	s DIODE RK44
D207	8-719-501-34	s DIODE S3VC40R
D208	8-719-160-68	s DIODE RD18FB2
D209	8-719-981-00	s DIODE ERC81-004
D210	9-904-799-01	s DIODE MA2120
F101	9-907-103-01	s FUSE 4A 250V
F102	9-907-103-01	s FUSE 4A 250V
IC101	8-749-924-40	s IC STR-S6525
IC102	8-759-977-63	s IC MA2830
IC103	8-749-923-66	s IC STR-83145
IC201	8-759-420-19	s IC AN1431T25
IC202	8-759-135-80	s IC UPC358C
IC203	8-759-420-19	s IC AN1431T25
IC204	8-759-420-19	s IC AN1431T25
IC205	8-749-920-43	s IC SI-3050CA
IC206	8-749-921-21	s IC SI-3120CA
IC207	8-749-920-43	s IC SI-3050CA
IC208	8-749-920-43	s IC SI-3050CA
L101	9-907-102-01	s FILTER, LINE
L102	9-907-102-01	s FILTER, LINE
L103	9-904-796-01	s BEAD CORE
L104	9-904-796-01	s BEAD CORE
L201	9-902-553-01	s BEAD CORE
L202	9-902-553-01	s BEAD CORE
L203	9-907-112-01	s COIL, CHOKE 10uH
L204	9-902-553-01	s BEAD CORE
L205	9-907-112-01	s COIL, CHOKE 10uH
L206	9-902-553-01	s BEAD CORE
PC101	8-749-923-50	s PHOTOCOUPLER PC111YS
PC102	8-749-923-50	s PHOTOCOUPLER PC111YS
PC201	8-719-161-00	s PHOTOCOUPLER PS2501-1-H
Q101	9-904-781-01	s TRANSISTOR 2SC2061
Q201	8-729-900-80	s TRANSISTOR DTC114ES
Q202	8-729-900-80	s TRANSISTOR DTC114ES
Q203	8-729-900-80	s TRANSISTOR DTC114ES
Q204	8-729-900-80	s TRANSISTOR DTC114ES
Q205	8-729-900-80	s TRANSISTOR DTC114ES
R101	1-202-719-00	s COMP 1M 1/2W
R102	9-904-783-01	s THERMISTOR 5

(SWITCHING REGULATOR)

Ref. No. or Q'ty	Part No.	SP Description
R103	1-218-642-11	s METAL 100K 1W
R104	1-218-642-11	s METAL 100K 1W
R105	1-260-127-11	s CARBON 220K 1/2W
R106	1-260-127-11	s CARBON 220K 1/2W
R107	1-215-925-11	s METAL 22K 3W
R108	1-215-925-11	s METAL 22K 3W
R109	1-215-882-00	s METAL 22 2W
R110	9-907-093-01	s WIREWOUND 0.15 2W
R111	9-907-094-01	s RESISTOR 1/2W
R112	1-260-080-11	s CARBON 27 1/2W
R113	1-247-855-31	s CARBON 10K 1/4W
R114	1-249-412-11	s CARBON 390 1/4W
R115	1-247-871-11	s CARBON 47K 1/4W
R116	1-249-411-11	s CARBON 330 1/4W
R117	1-249-423-11	s CARBON 3.3K 1/4W
R118	1-247-883-00	s CARBON 150K 1/4W
R119	1-247-883-00	s CARBON 150K 1/4W
R120	1-240-441-11	s CARBON 100K 1/4W
R121	1-215-928-11	s METAL 68K 3W
R122	1-215-928-11	s METAL 68K 3W
R123	1-215-863-11	s METAL 100 1W
R124	1-215-863-11	s METAL 100 1W
R125	1-260-091-11	s CARBON 220 1/2W
R126	9-904-783-01	s THERMISTOR 5
R127	1-260-127-11	s CARBON 220K 1/2W
R128	1-260-127-11	s CARBON 220K 1/2W
R129	2-249-389-11	s CARBON 4.7 1/4W
R130	1-247-883-00	s CARBON 150K 1/4W
R131	1-249-408-11	s CARBON 180 1/4W
R132	1-240-441-11	s CARBON 100K 1/4W
R201	1-215-916-00	s METAL 680 3W
R202	1-215-916-00	s METAL 680 3W
R203	1-260-099-11	s CARBON 1K 1/2W
R204	1-247-855-31	s CARBON 10K 1/4W
R205	1-247-855-31	s CARBON 10K 1/4W
R206	1-249-420-11	s CARBON 1.8K 1/4W
R207	1-249-417-11	s CARBON 1K 1/4W
R208	1-249-423-11	s CARBON 3.3K 1/4W
R209	1-249-415-11	s CARBON 680 1/2W
R210	9-902-556-01	s RES, FUSIBLE 1 1/4W
R211	1-247-855-31	s CARBON 10K 1/4W
R212	9-904-801-01	s METAL 8.25K 1/4W
R213	1-247-855-31	s CARBON 10K 1/4W
R214	1-247-855-31	s CARBON 10K 1/4W
R215	1-247-855-31	s CARBON 10K 1/4W
R216	1-247-855-31	s CARBON 10K 1/4W
R217	1-249-425-11	s CARBON 4.7K 1/4W
R218	1-247-855-31	s CARBON 10K 1/4W
R219	1-247-855-31	s CARBON 10K 1/4W
R220	1-215-428-00	s METAL 2K 1/4W
R221	1-214-753-00	s METAL 10K 1/4W
R222	1-260-083-11	s CARBON 47K 1/2W
R223	1-249-417-11	s CARBON 1K 1/4W
R224	1-249-419-11	s CARBON 1.5K 1/4W
R225	1-247-855-31	s CARBON 10K 1/4W
R226	9-907-107-01	s RESISTOR 430 14W
R227	9-907-108-01	s RES, FUSIBLE 0.22 14W
R228	9-907-108-01	s RES, FUSIBLE 0.22 14W
R229	9-907-109-01	s RESISTOR 1.3K 14W
R230	1-249-416-11	s CARBON 820 1/4W
R231	1-249-414-11	s CARBON 560 1/4W

(SWITCHING REGULATOR)

Ref. No. or Q'ty	Part No.	SP Description
RY201	9-907-115-01	s RELAY
T101	9-907-100-01	s SWITCHING
T102	9-907-101-01	s SWITCHING
TC101	9-907-092-01	s THERMAL CUT OFF M135
VR201	9-907-110-01	s RES, VAR CARBON 2K
VR202	9-907-111-01	s RES, VAR CARBON 500
VR203	1-238-570-11	s RES, VAR CARBON 2.2K
VR204	1-238-570-11	s RES, VAR CARBON 2.2K